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Frontispiece

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Group of Iban women, pp. 3, 4.

[frontispiece]

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LONDON
Cambridge University Press
FETTER LANE

NEW YORK · TORONTO
BOMBAY · CALCUTTA · MADRAS
Macmillan

TOKYO
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IBAN OR SEA DAYAK FABRICS AND THEIR PATTERNS

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A DESCRIPTIVE CATALOGUE OF
THE IBAN FABRICS IN THE MUSEUM OF
ARCHAEOLOGY AND ETHNOLOGY
CAMBRIDGE

by

ALFRED C. HADDON

and

LAURA E. START

CAMBRIDGE
AT THE UNIVERSITY PRESS
1936

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OC6

PRINTED IN GREAT BRITAIN

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PREFATORY NOTE

During the last half of December, 1898, I had the good fortune to be the guest of Mr R. Shelford, the Curator of the Sarawak Museum at Kuching. Most of my time in Kuching was spent in the Museum, where more especially I studied the fine collection of Iban cloths, as many patterns on the cloths were named. I took ninety-three photographs of sixty-nine cloths in the Museum and of some twenty cloths belonging to various people; more than two hundred sketches of patterns and designs were made of which the names were obtained.

I collected a few cloths and names, and subsequently purchased a large number of cloths from Dr Charles Hose, on which names had been affixed to their respective patterns and designs. These cloths I have given to the Museum of Archaeology and Ethnology, University of Cambridge. There are, however, two or three cloths in the collection obtained from other sources.

This material, together with numerous data from other tribes, was accumulated in the hope that I should be in a position to study the decorative art of the natives of Sarawak, which ambitious scheme can now be only partially realized.

The Cambridge Museum thus possesses a fine representative collection of Iban cloths, consisting of 14 *kalambi*, jackets, 49 *bidang*, petticoats, 7 *sirat*, loin-cloths, 1 *bedong*, woman's girdle, 2 *dangdong*, shawls, and 11 *pua*, blankets; some 84 in all. These bear names of more than 1500 patterns and designs.

The British Museum possesses about the same number of Iban cloths. On the fifty-nine specimens purchased from Dr C. Hose there are comparatively few named patterns, and there are none on the cloths obtained from other sources.

The names on the foregoing cloths and those which I gathered in Sarawak afford a basis for a study of these interesting and beautiful fabrics.

I was fortunate to enlist the enthusiastic co-operation in this study of Miss Laura E. Start, M.Ed., Lecturer in the Education Faculty, Victoria

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000 University of Manchester. To it she has applied her practical experience and thus, so far as I am aware, there is for the first time a full technical description of the manufacture of Iban cloths and garments, and in addition an adequate account of their decorative motives. Miss Start also made all the drawings.

A. C. HADDON

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INTRODUCTION

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This study is based on the large collection of Sarawak cloths in the Museum of Archaeology and Ethnology at Cambridge. The equally large collection of cloths in the British Museum has also been examined by us, and we have compared the available specimens with the numerous photographs and sketches made by one of us in Sarawak. We therefore venture to claim that there is sufficient material for a preliminary study of this nature. There is a considerable number of designs and patterns which are not here mentioned and for most of them we do not know by what names they are called.

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Although some of the designs are sufficiently realistic to make identification possible, most of them are highly conventionalized. Indeed, in many cases it is almost impossible to see any resemblance between the design and the object it is intended to represent. No doubt some students will question whether there is any such connection, but we must remember that these are traditional representations which have been transmitted through very many generations and it could not be expected that a realistic treatment could often persist.

The Iban certainly admit that most of the designs or patterns are intended to represent some concrete object. Cloths that have been collected in different places and at various times show designs that resemble each other to a remarkable extent, and, furthermore, in most cases the Iban apply similar names to them. Every Iban cannot be expected to know the names of all the designs and patterns, so it is not surprising that identifications should occasionally vary. There are numerous tribes or groups of Iban and this fact may cause some discrepancy in the names given, not only in identification but through dialectic differences; added to this are divergencies in the spelling of words by the transcribers.

If a native is not sure what a pattern really means he will be apt to describe it as looking like some particular thing or as representing that thing. It is obvious that the nearest approach to certainty can only be attained by inquiry from the actual woman who made the pattern.

It sometimes happens that apparently very similar designs may have different names applied to them. These usually are simple designs or

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X531 patterns, and in such cases there may be no recognized general name for them. To take one example, a zigzag has its own name, *lelingkok*, but it is often termed *semerai sungai*, which implies the conception of going in a canoe from one bank of a river to the other so as to avoid or make use of stronger currents. It has also been described as the movement or progression of a snake.

X531 128 The vast majority of the names in our collection, as well as all those on the specimens in the British Museum, were collected by Dr Charles Hose and naturally we have accepted these as accurate, but either he or the persons whom he employed made variations in the spelling of a given word; usually we could ascertain the most common or likely variant and in some cases we adopted instead the spelling of the word given by the authors of the *Sea Dyak Dictionary*, as that must be regarded as authoritative.

In many cases, but by no means in all, a translation was given by Dr Hose of the native name—sometimes literally, sometimes freely—these we have copied and printed in quotes. Occasionally the translation of a word differed from that given in the *Sea Dyak Dictionary*; these cases have usually been noted by us. Unfortunately there are many native names for which we cannot find a translation; they are given as written by the transcribers. Translations by us are printed without quotes.

128 Originally the labels were pinned on to the cloths in what was intended to be their appropriate position, but even so, on account of the relatively large size of the labels it is not always apparent to which design or what part of it the label applied. Subsequently numbers written on tape to correspond with the labels were sewn on to the cloth by Mrs Haddon, who took great care to retain the original position of the labels. In some cases there evidently was a mistake in the original position of a label. These sources of error are not quite so serious as might be feared, since we have such a large number of names on different cloths that checking is almost always possible. We venture to hope that few mistakes due to these causes have been perpetuated by us.

A card catalogue of drawings of every design bearing the same name was made, and the most typical examples in each group were selected and have been included in pls. I to XXV.

Our procedure in the following pages is to give the weave, colour and methods of producing the patterns of a considerable number of individual

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cloths, and in the case of the jackets how they were constructed. The patterns and designs are described and illustrated as copiously as space permits, and we have added what information we have been able to find with regard to their significance; very rarely have we hazarded suggestions of our own. 128

We gratefully thank those Museum authorities who have afforded us opportunities for examining the cloths under their charge and the various unknown Iban who have given information. We feel that especial thanks are due to the late Dr Charles Hose for having supervised the identification of the designs on the cloths that have formed the basis of our study; the help afforded by these names has been invaluable. 000

The cloths themselves, together with the photographs and sketches made in Sarawak, are placed in the Cambridge Museum of Archaeology and Ethnology and are available to those who would like to consult them.

We candidly admit that we are merely pioneers in this investigation and it remains for others who can interrogate the Iban themselves to confirm, modify, or correct our provisional statements and to enter more deeply and securely into the motives that lie behind these expressions of Iban aestheticism.

The admirable compilation *The natives of Sarawak and British North Borneo* (1896), by H. Ling Roth, has been of very great assistance to us, especially his chapter XVII. His *Studies in primitive looms* (1918) is invaluable, as it is based on his own investigations. We have quoted with due acknowledgment from various authors whose observations have elucidated our subject and to those whose names are most frequently mentioned we offer our thanks. Particular mention should be made of the excellent *Sea Dyak Dictionary* by the Rev. W. Howell and D. J. S. Bailey, to which we have so often referred under *S.D.D.*, and we have found their English-Sea Dyak Vocabulary useful. 114

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THE IBAN OR SEA DAYAKS

101 THE general appearance and psychical characteristics of the Iban have been well described by Hose and McDougall (I, p. 32, and measurements taken by Haddon are given in II, pp. 339, 340). They are industrious and energetic, and are great wanderers; this latter peculiarity struck the Kayans, who termed them "Ivan" (immigrant or wanderer), and this name has been adopted by large numbers of them in recent years and modified into Iban (II, p. 250). "When the Ibans became associated in piratical matters with the Malays of the coast, these latter assigned to their allies the heads of their enemies, as a sort of perquisite. This state of affairs lasted until well into the nineteenth century; and it is from their association with the Malays of the coast in their piratical expeditions that the Iban became known to Europeans as a Sea Dayak" (Hose, 1926, p. 145). The term Dayak, Dyak, etc., merely designates a non-Malayan inhabitant of Borneo and has no ethnic or tribal significance. It is probably derived from the Malay word *daya*, "inland".

174 The Iban can be distinguished from the other peoples of Borneo by their physical and mental traits and by many differences in culture. There appear to be two main ethnic stocks in Borneo: (1) a narrow-headed type, often termed Indonesian, but, to avoid ambiguity, the term Nēsiōt is preferable (Haddon, 1929, pp. 22, 119); (2) a broad-headed type, Proto-Malay (or Oceanic Mongol), which is a branch of the Pareoean or Southern Mongoloid (*l.c.* 1929, p. 32), to which stock the Iban may be assigned (cf. Haddon, 1901). Hose and McDougall (II, p. 248) regard the Iban as belonging to the same "stock from which the true Malays of Sumatra and the Peninsula were differentiated by the influence of Arab culture. A large number of the ancestors of the present Ibans were probably brought to Borneo from Sumatra less than two hundred years ago [Hose, 1926, p. 7, says, "less than three hundred years ago"]. . . . Some two centuries ago, a number of Malay nobles were authorised by the Sultan of Brunei to govern the five rivers of

174 Sarawak proper, namely, the Samarahan, the Sadong, the Batang Lupar, the Saribas, and the Klaka rivers. These Malays were pirate leaders, and they were glad to enrol large numbers of pagan fighting men among their followers. . . [they] found, no doubt, that their pagan relatives of Sumatra lent themselves more readily to this service than the less warlike Klemantans of Borneo, and therefore, as we suppose, they brought over considerable numbers of them and settled them about the mouths of these rivers". "It seems to us probable that the greater part of the ancestors of the Ibans entered Borneo in this way. But there is reason to think that some of them had settled at an earlier date in this part of Borneo and rather farther southward on the Kapuas River. . . . In most respects they closely resemble the other Iban tribes, but they are distinguished by some peculiarities of language and accent; their manners are gentler, their bearing less swaggering; they are less given to wandering" (II, p. 249).

We are not in a position to criticize the supposition that some 200 or 300 years ago Malay chiefs introduced Iban warriors from Sumatra to Sarawak, but Hose and McDougall recognize an earlier population of Iban in Borneo. It seems doubtful whether the characteristic Iban culture is so recent as Hose and McDougall seem to imply, and it would be interesting to know from what part of Sumatra "their pagan relatives" came, and if there are any traces there now of such people. We suggest that the Iban migration into Borneo may be regarded as an early wave of the movements that culminated in the Malay Empire.

Hose and McDougall (I, p. 31) state that the Iban "have spread northwards over Sarawak during the latter half of the last century, chiefly from the region of the Batang Lupar, where they are still numerous. They are still spreading northward, encroaching upon the more peaceful Klemantan tribes. They are most densely distributed in the lower reaches of the main 162 rivers of Sarawak, especially the Batang Lupar and Saribas rivers, which are now exclusively occupied by them; but they are found also in scattered communities throughout almost all parts of Sarawak, and even in British North Borneo, and they extend from their centre in Sarawak into the adjacent regions of Dutch Borneo, which are drained by the northern tributaries 101 of the Great Kapuas River". The different tribes or groups of Iban are 619 distinguished by the names of the rivers along which they dwell, thus they

are known as Batang Lupar, Saribas, Rejang, Kanowit, etc. The physical characters of the various ethnic groups in Sarawak are described by Haddon in an Appendix to Hose and McDougall's monograph. 101 619

IBAN COSTUME

The Iban are extremely fond of dress and both men and women wear many ornaments as well. 291

The usual male attire consists of:

Sirat (*chawat* of the Malays), or waist cloth, usually of red or blue cotton cloth, sometimes having an embroidered end made of native material.

Labong, a headkerchief, which is usually richly decorated; or a cap of woven cane, both of which are often ornamented with feathers.

Takai buriet or seat mat, usually made of skin or cane matting, the edge being finished off with cloth and beads or buttons.

Kalambi or jacket, with or without sleeves, used chiefly on ceremonial occasions.

Dangdong or shawl is also sometimes worn over the shoulder.

The women wear:

Bidang or petticoat, reaching to the knees and usually made of home-made cloth elaborately decorated with warp-dyed patterns.

Bedong or woman's waist band or girdle.

Rawai or corset, made of a series of split ratan rings upon which brass rings are threaded. The ratan rings fit so tightly that it is difficult to bend the body.

Kalambi or jacket, sometimes rather longer than the men's but of the same shape.

Girdles of coins, silver and brass chain or strips of coloured cane are also worn round the waist, and *tanggok* or necklaces of beads, cane and silver coins round the throat. Heavy earrings in the distended lobe of the ears are worn by most tribes. 301

Some idea of the women's costume can be gathered from the frontispiece, which shows a group of four women and two children. The women are wearing skirts, *bidang*, with patterns; spider designs can be seen on the 291

291 second from the left and shrews and spiders on the second from the right, which also shows clearly the way the garment is folded when worn. Three figures show the corset, *rawai*, and the girdles of coins round the waist outside it. Two women have bead necklaces and the two on the right wide bead collars. The jackets of the two women to the left are of imported material, but the central figure wears a *kalambi* of striped native cloth somewhat similar to Z. 2342, which is described briefly on p. 37. The tall girl, second from the right, is a Kayan who lives with an Iban family.

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THE PRODUCTION OF CLOTH

The garments worn by the Iban, whether petticoats, coats, loin-cloths or shawls, as well as their blankets, are made either from bark-cloth or hand-woven cotton stuff; the latter material is usually of native manufacture.

BARK-CLOTH

287 The bark-cloth is the cheaper material, and garments made from it are therefore worn when working in the jungle and by those who cannot afford woven cloth. "The old blankets, curtains, waist-cloths, and coats of the Dyaks were made of bark-cloth" (*S.D.D.* p. 133).

287 314 There are several sources from which suitable material for making bark-cloth can be obtained: the *pedalai*, bread-fruit tree (*Artocarpus* sp.), and a tree of a similar type called *tekalong* provide bark which can be wrought into loin-cloths, strips of about 10 ft. in length being obtainable when the trees are mature (*Sarawak Gazette*, 1894, p. 146).

The Kayans use the inner bark of a tree which they call *tajam*, but is called *ipoh* by the Iban. According to the Catalogue of the Brooke Low Collection this appears to be identical with the *upas* tree of Java, *Antiaris toxicaria*. In the *S.D.D.* (p. 60) it is stated that "there is another species of tree called *ipoh*, a sort of bread-fruit, the bark of which is made into white blankets, *pua*". Hose and McDougall (1, p. 220) state that cloth "is made from the bark of trees of several species (principally the *Kumut*, the *ipoh*, and the wild fig)".

287 The process of making the bark-cloth is to peel off the bark in broad strips, soak it well in water and then hammer it out with a heavy wooden

mallet, which is grooved in deep cross cuts on its broad surface. This hammering breaks up the tissue of the bark and makes it more pliant but also accentuates any holes or rents, which are strengthened transversely by darning lines and patterns with thread made from the fibre of pineapple leaves or imported material (fig. 1).

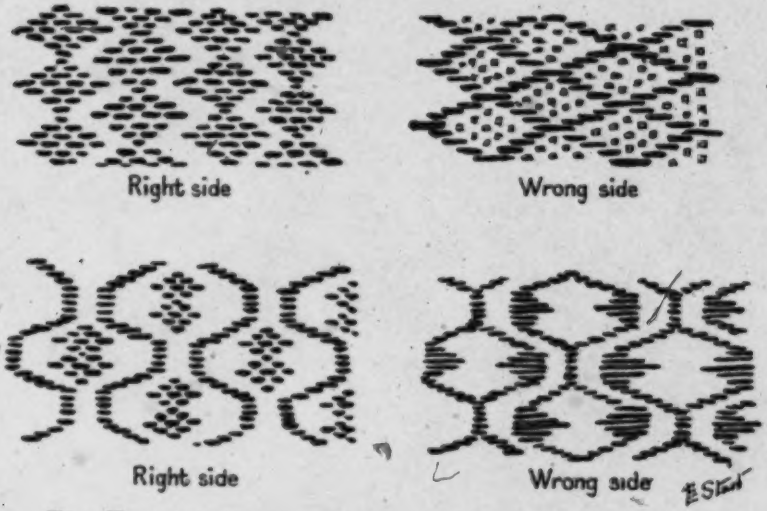

Fig. 1. Two patterns in transverse darning on a bark-cloth sleeveless jacket, open down the sides. British Museum (5425).

COTTON CLOTH

The cloths which are used for garments are usually of purely native manufacture and are entirely the work of the women, from the setting of the cotton seed to the making up of the garment when the cloth has been woven. The men make the wooden beams, battens, heddles and spools used in weaving, but otherwise take no part in the work.

In order to make our account more complete we incorporate information given by the Rev. W. Howell (1912, p. 61) which has not been recorded by other writers. He says that "separate farms or gardens (*empalai*) are set apart for growing cotton (*taya*).... After the cotton has been picked, taken

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from the colouring of *Cylindrophis rufus*, a Bornean snake which has a red head, a red tip to its tail and a body striped black, white and red (see p. 33).

Unusual effects are sometimes obtained by dipping the edges of the woven cloth into an indigo dye bath for a short time. This process gives a light-blue pattern on a very dark brown, blue or black ground (according to the strength of the bath or the length of immersion) and alters the coloured border stripes, yellow becoming green, white a pale blue, and scarlet a crimson or magenta tint.

Quieter but good combinations of colour in the compound stripes are black and yellow on a brown ground; buff and dark brown on a red-brown ground; dark brown and pale blue on red-brown; and dark blue, scarlet and white. None of these have any special name but are described as *ara surik*, "a striped pattern", or as *surik anak*, "the child or young stripe", a fanciful designation for the lesser or narrower stripes.

A mourning *bidang* for a widow is obtained by immersing the whole garment in an indigo bath until the pattern appears as light blue on a black ground.

The broad central band of pattern is sometimes replaced by a plain one, and if the border patterns and compound stripes are well spaced this arrangement is sometimes very successful.

A third scheme consists in having a series of narrow patterned stripes, separated by composite colour stripes, right across the width of the cloth. Such arrangements lose a great deal in their general effect.

DESCRIPTION OF INDIVIDUAL *BIDANG*

The patterns of the following *bidang* are described in the position they occupied when being woven on the loom, not as they appear in wear; thus the term "sides" refers to the edges of the cloth running in the direction of the warp. When the petticoat is being worn these edges or "sides" become the top and bottom of the garment.

The native names of the designs are printed in italics; they were obtained when the cloths were obtained. Some *bidang* are only briefly described by us, the designs on which are often insignificant, and as they generally occur more distinctly on those cloths which are more fully treated they have not been described in detail.

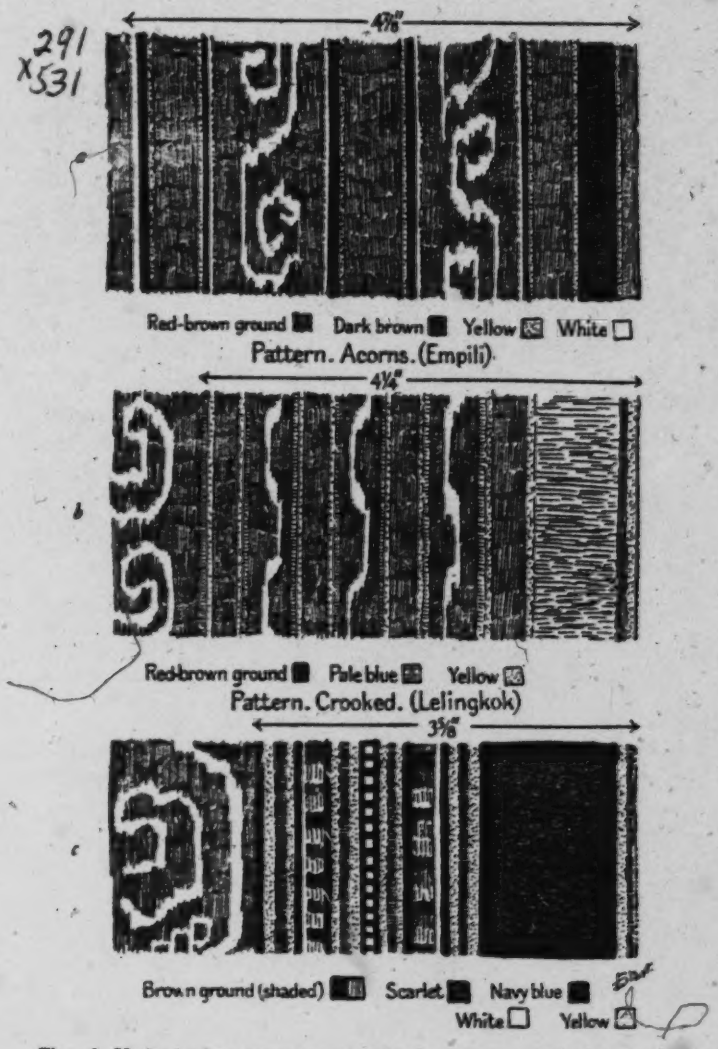

Fig. 28. Various colour arrangements in border stripes: *a*, *bidang* 35.874, p. 80; *b*, *bidang* 35.861, p. 71; *c*, *bidang* 35.878, p. 81.

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in which the warp threads form the surface, and as they had been previously dyed after the pattern portion had been reserved by tying up, they produce the desired pattern. 291 286

The average width of 30 *bidang* cloths is 1 ft. 8 in. (50·8 cm.) and the average length 3 ft. 10 in. (116·9 cm.), and according to Mr Leggatt it takes several months to dye and weave a piece of cloth 45 in. in circumference, i.e. a length of 3 ft. 9 in. which has been joined by sewing.

ARRANGEMENT OF THE PATTERNS AND GENERAL COLOUR EFFECTS

Most of the *bidang* have a broad central band elaborately decorated with patterns. These patterns appear as designs in stone or buff colour against a background which is a reddish brown in most cases, but occasionally the whole of the warp for the patterned stripe is dyed a light brown first, in which case the patterns appear as light brown. 291 531X

The reddish-brown ground commonly used is sometimes varied in small patches by being re-dyed in indigo so that it becomes a dark brown, almost vandyke, in those parts. Such variations usually indicate a highly skilled worker. On either side of the broad central pattern is a series of compound stripes, each composed of several narrow warp stripes of different colours. Often a colour consists of only a few warp threads, so producing the effect of a "pin stripe". Narrow patterned stripes are frequently used between these composite ones; three sets of border stripes are illustrated in fig. 28 and it will be noted that the self-colour stripes at the outer edges are often wider. In a large group of cloths (for *bidang*) they vary from half an inch to an inch and a half; sometimes there is one broad one, in other examples there is a series of three or four averaging half an inch each.

These broad self-colour stripes form a strong contrast with the quieter buff and brown pattern in the central band and provide a strong accent which is particularly pleasing in its effect.

One of the most popular arrangements of colour in the composite stripes is scarlet, black, or an indigo so dark that it appears black by contrast, and yellow; or scarlet, black, white and yellow. This arrangement is described as *ara surik kendawang*, "the coloured stripes of a snake", and is derived

291
286 19 pairs, 7 threes, 2 fours and 2 singles; whilst in the patterned portion the grouping was 24 pairs, 4 threes and 2 singles. A detailed analysis of 30 of these cloths is given later.

As the upper and under webs are tied together in arranging the pattern when on the tying frame, this analysis of the grouping of warps means that it is usual to tie up four threads, although on occasions the number may be eight, six or two.

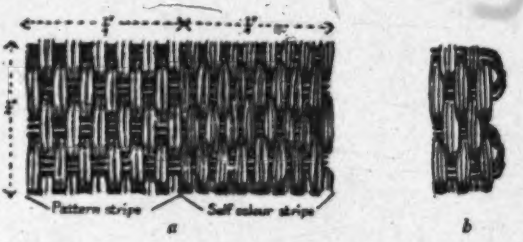

Fig. 27. *a*, Proportions of weft visible when warps are paired and grouped in threes; *b*, three parallel weft threads turned at the edge of the cloth.

The average number of weft picks or shoots to the inch in 30 cloths made for *bidang* and *kalambi* was 21·8, practically 22. In winding the weft on the spools two, three or four threads are wound at the same time and kept quite flat like a ribbon or tape, so that in passing the spool from side to side a series of parallel weft threads is carried across, an arrangement which usually makes the weft broader in section than the warp.

In the group of cloths under consideration 10 had two parallel weft threads in each pick, 11 had three, 4 had four and only 5 were single weft threads. An example with three, showing the crowding of the warps in the plain colour stripes and the turning of the weft threads at the edge of the cloth, is given in fig. 27, *b*.

The weft is usually brown in colour, either reddish or a dull vandyke shade.

The weaving itself is of the simplest type, one group of warp threads being picked up and left down alternately by the spool in passing.

The width of the weft and the large number of warp ends as compared with weft picks result in the production of a cloth with a rep or poplin weave,

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The piece of cloth for a *bidang* may vary in width from just over 16 in. to nearly 2 ft. and the length from 3 ft. 6 in. to 4 ft. 3 in. The average length of 30 petticoats taken at random from a group of 40 was 3 ft. 8¾ in. and their average width just over 20 in. 291

BIDANG CLOTHS

The cloth used for *bidang* is generally very firm and extremely hard wearing, the yarn used being firmly spun although it varies greatly in thickness, an average section being 0·25 mm.

The yarn used for the warp colour stripes, which form borders at the top and bottom of the petticoat when in wear, but which being warp threads are really parallel with the sides of the cloth, is usually finer in section than that in the patterned part of the web. These coloured yarns are dyed in the hank before being set up in the loom with the patterned warps. The bright reds used by the Saribas Iban are usually the finest, averaging from 0·15 mm. to 0·2 mm. in section, whilst the pure white sometimes used in the border stripes is the coarsest, reaching 0·5 mm.

The white thread is the only yarn in any of the cloths which is used "doubled" in the accepted meaning of that term (i.e. two threads which are twisted upon one another) and for this reason and the fineness of its bleaching one might suspect it to have been an importation, although the twist in the single thread and the quality of the cotton fibre itself indicate native origin. It may be that the fibre is native but has been spun and doubled mechanically, instead of by hand, which would mean that the yarn was not produced by the weaver of the cloth as is usually the case. 286 291

The warps in cloths intended for *bidang* are nearly always grouped for the purpose of weaving, being usually arranged in pairs (the threads remaining parallel) or threes, though four in a group occur occasionally in the self-colour stripes, where there are usually a greater number of warp ends to the inch (fig. 27, *a*). Taking a series of 30 cloths it was found that the average number of warp ends to the inch in the self-coloured stripes was 147, whilst in the patterned ones it was only 116; this shows that the fabrics are usually more closely woven at the sides than in the centre. The close weaving of the plain colour stripes enhances their value aesthetically.

In the same set of cloths the grouping of the warps for the borders was

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kalambi. Presumably the large reptile that dominates the back is a monitor lizard, *Varanus* sp. The remaining surface is covered with evenly distributed scroll-like designs, which evidently are phyllomorphic; the front of the jacket is ornamented with similar designs. Along the bottom, both back and front, is a pattern of bamboo shoots.

There is a woman's "*kalambi buri*" in the British Museum (1905, 357) very similar to ours; the front is ornamented with "scorpions, crabs, and starfish" and the back with a large "lizard". Another one (1923, 10.18.1) is of particular interest as it is made of bark-cloth; it is ornamented with a lizard, two scorpions, and scrolls also of nassa shells.

An ordinary patterned *bidang* (1905, 393) in the British Museum has a black flounce added to its lower half, which is ornamented with nassa shells arranged in triangles with curves springing from their apices; these are labelled *punchok rebong*, "bamboo shoots".

Hose and McDougall (1, pl. 30) give a photograph of an Iban woman wearing a sleeved *kalambi* decorated with shells; the patterns in front are more open and less complicated than those of our coat. The lower part of the *bidang* she is wearing is also decorated with nassa shells; above the terminal broad band of presumably plant-designs are scorpions or lizards with their long tails interlocked.

The supposition therefore is that our jacket is a woman's *kalambi* and that the reptile on the back is a monitor lizard.

BIDANG, PETTICOATS

291 The *bidang* or women's petticoats form a particularly interesting group of cloths for study, as almost all are patterned and the patterns comprise a larger and more varied series of motives than are to be found in either the *kalambi* (jackets) or the *pua* (blankets). Each petticoat is made from half a length of cloth as it comes from the loom and therefore exhibits one complete section of the pattern. The cut ends of the cloth are joined together by a rather coarsely sewn counter-hem, such as is often used for the sleeves of the *kalambi* (fig. 12, *c*). The completed garment is pulled on over the head and arranged around the waist, the excess in width being made into a pleat, the top of which is tucked in, to hold the garment firmly to the figure.

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Fig. 26. Back of same jacket with a reptilian motive in shells.

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[p. 51]

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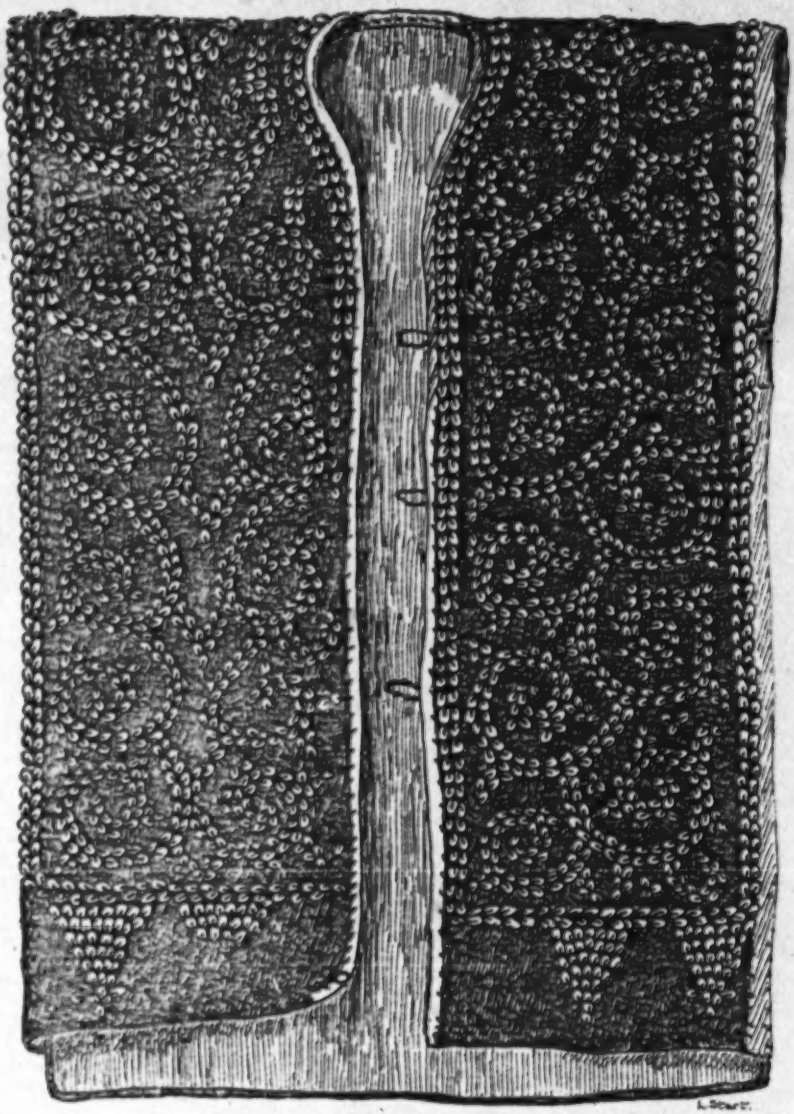

Fig. 25. Front of *kelambi* 35.911, decorated with shells.

[p.50]

The motives in the badge (fig. 24) represent *lelambak anyam*, a flower similar to that plaited in mats (pl. XXII, *h*), and *dabong lilit*, a dog-tooth pattern in gold thread. 291 531x

35.901. *Baju sungkit*, an embroidered jacket worn by women; it was made by a Nabai Iban woman.

A plain cloth jacket dyed reddish brown with an applied panel called *tandar* on the upper part of the back, which is much of the same type as the embroidered ends of *sirat*. The white cloth is of coarse texture and the panel is outlined with an inner strip of scarlet flannel and an outer one of yellow flannel. The designs are boldly embroidered in red and blue. A narrow upper border consists of a zigzag, *lelingkok*, with a *pala buntak*, "head of locust", on each apex. The lower border is labelled *pemuchok tubu*, shoot of bamboo. We have no information concerning the design of the broad central band, which is exactly like that on a "little girl's jacket, from Batang Lupar", figured by Ling Roth, II, p. 33.

35.911. Shell *kalambi*. The jacket in figs. 25, 26 is entirely decorated with *buri* shells (*Nassa* sp.) and is an exceptionally fine example of this method of ornamentation, which is now almost obsolete, European buttons being used instead. An immense amount of labour has been expended on the preparation of the shells, for the spire of each has been ground away, leaving a flat piece about $\frac{1}{10}$ in. in thickness containing the mouth of the shell. A second hole was bored and each shell was then secured to the cloth by two stitches made with strong twine (the fibre of pineapple leaves), one through the aperture and down the drilled hole, the other fastening down the narrow end. 291 32 531 1 [283]

The foundation of the garment is an indigo-dyed cotton cloth backed with a much coarser native cloth in order to give sufficient support for the weight of the shells. The front edges, side seams and armholes are further decorated by being bound with red cloth. 291 531x

A very primitive and effective method of fastening is provided by means of three roughly shaped flat wooden discs on the right-hand side; each disc has a hole in the centre through which a string is knotted to hold it in place. There are corresponding loops on the left-hand edge made by tying a piece of twine through the back of a few stitches.

This jacket was originally the property of a Baju Bari Dayak from the Baram river, but there is no information whether it was a man's or a woman's

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The method by which these various devices have been produced is embroidery. If individual threads are followed it will be found that they do not all end at the lowest point of a curve or fret, but sometimes continue round it, which would be impossible if the threads were introduced during the progress of the weaving by free spools. An enlargement of one of the bird motives in which the stitches are clearly indicated is given in fig. 7.

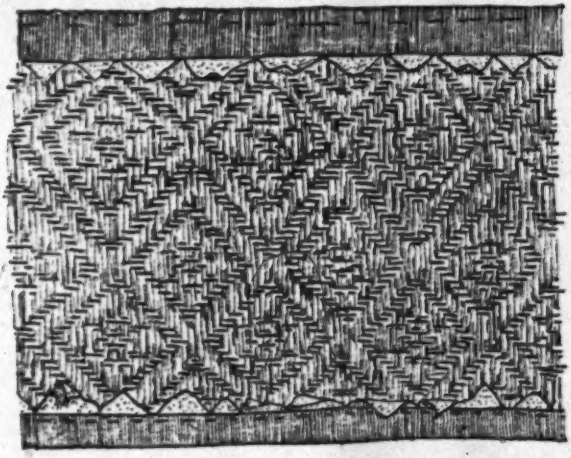

Fig. 24. Badge at the back of *kalembi* 35.906, worked in the brocade method with gold thread weft.

A new embroidery thread is begun in a somewhat unusual manner, being threaded through the cloth singly, then both ends being brought to the front it is worked as a double thread.

The badge at the bottom of the jacket at the back is not a weft-mosaic like the Saribas variety, but is worked like a brocade or damask with a floating weft, the triple gold thread (not twisted) which forms this weft being carried across the back when not needed on the right side. The warps are grouped in fours or sixes and the result is a fabric of very loose texture. Owing to the very loose texture, the coloured warps which form stripes in the cloth are visible in this jacket as a continuation across the badge; these are not shown in figs. 23, *b* and 24.

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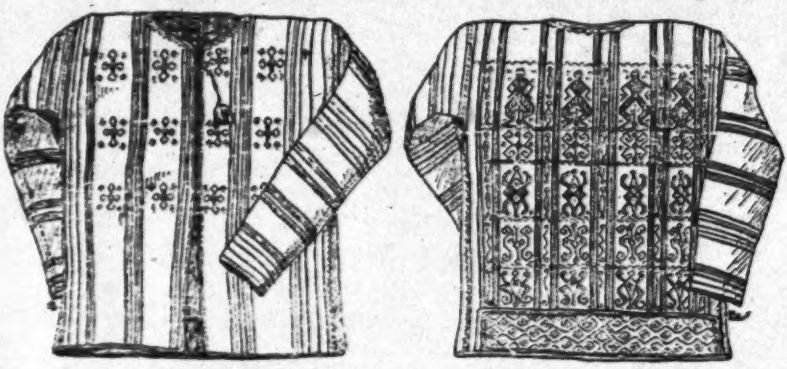
The number of warp groups to the inch varies from 60-74, averaging 272 ends in all the stripes except the white, where they are in pairs and there are 44 pairs to the inch (88 ends). [286] 291 531X

The weft is red throughout and consists of a bundle of four, six or eight threads slightly twisted, and there are on an average 22 picks to the inch.

The motives which embellish the garment are embroidered in white and black, with the occasional addition of gold thread, usually in the form of a spot. They are entirely different from those on any other coat in the collection, as can be seen in fig. 23, which shows the front and back of the garment.



A B

Fig. 23. A, front and B, back of a *kalambi*, 35.906, with woven stripes and embroidered designs. Fig. 7, p. 15, is an enlargement of a *burong kaki panjai* in the last row of B. The badge (fig. 24) is worked in the brocade method with a gold thread weft.

On the front two isolated, *tabor*, motives appear, the cruciform one representing a flower, *bungai*, rather like pl. XXII, *i*, and, around the flower, four spots, *bintang*, "star", which are worked in gold thread. On the back, taking the figures in the broader stripes in order from top to bottom, the first represents a frog, *engkatak* (pl. XIII, *e*), the second a concealed bird, *burong bekarong*; the third a scorpion, *kala* (pl. XVII, *a*); the fourth a concealed bird slightly different from the previous one (pl. VII, *k*); and the fifth, *burong kaki panjai*, a "bird with long legs" (fig. 7). In the narrow vertical stripes there are three other motives, the upper three of each stripe, the lizard, *lachau* (pl. XII, *a*); the fifth down the stripe is the leech, *lintah* (pl. XVI, *h*), and the last represents ratan leaves, *daun wi*.

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292 727 E. H. Gomes (1911, p. 37) says *kalambi* "of a particular type can only be worn by men who have succeeded in securing a human head when on the warpath", but, as he does not give particulars, this statement does not help us; perhaps the *kalambi* illustrated by Hose, 1926, pl. p. 170, may be one of this kind—it is ornamented with two feathers of the hornbill, a bird everywhere associated with fighting.

It is somewhat rash to speculate upon what occasions a *kalambi* of this sort would be worn, but some of the embroidered figures seem to indicate that it was associated in some way with head-hunting.

727 825 796 One of the three principal ceremonial feasts of the Iban is *gawai burong* or *gawai pala*, "bird- or head-feast", as described by J. Perham in Ling Roth, I, p. 256; II, pp. 174 ff. When a house has obtained a head a great feast must be made sooner or later; it is not a mere matter of eating and drinking but there is much ceremony of offerings and songs, and Singalang Burong is invoked to attend. Before he can start he must call from the jungle his sons-in-law, who are the sacred birds which the Iban use as omens—hence the term *gawai burong*. The hawk (kite), *lang*, with brown body and white head and breast is a personification of Singalang Burong. The bird-chief and his dependents come from above to give to the men strength and bravery in war, and to the women luck with paddy, cleverness, and beauty. The ceremony is in fact a religious drama.

291 X531 35.906. An embroidered *kalambi*. This coat is cut in exactly the same way as the others, but has different motives which have been produced by embroidery (fig. 23). Width, 17½ in. (44·4 cm.); length from shoulder to hem, 22⅝ in. (57·4 cm.).

The body of the cloth is red with warp stripes grouped on the front and back: black, yellow, red, white, black, white, red, yellow, black; these are called *surik ular kendawang*, see pp. 29, 33. The width of these grouped stripes varies, broader bands appearing at the edges of the cloth.

The sleeves, which are made from the full width of the cloth, have no other decoration than the coloured warp stripes.

The edges of the jacket are bound with red flannel and at the neck and round the badge at the back an extra row of yellow flannel with vandyked edges is added.

The number of warp groups to the inch varies from 60–74, averaging

We suggest that the jacket belonged to a *manang* and more probably to a *manang bali* ("*Bali*, v. to exchange, fade, s. alteration", *S.D.D.*). 292

The Iban believe that sickness is due to the presence of evil spirits in the patient's body, or to a spirit that has struck him or has enticed his soul out of his body; thus it naturally follows that the medicine men, or *manang*, must be able to charm the evil spirits away and persuade the soul to return to its earthly habitation. 763 756

The *manang* is next in importance amongst the Iban to the village chief, and sometimes the office is filled by the same man, especially if he is a faithful interpreter of dreams and successful in exorcizing spirits. The office of *manang* is hereditary, and may be held by either a man or a woman; it is extremely lucrative, as heavy sums are paid for the aid given in performing the ancient rites connected with birth and death, and it is in connection with the latter that three of the most important Iban feasts are held. Charms, which are the personal possession of the *manang*, are frequently used in the case of sickness; sometimes they are rubbed on that part of the body where the pain is felt, at other times they are dipped in water, which the patient afterwards drinks. In serious cases a fowl or a pig may be killed as an offering to the *antu*, or spirit, whose displeasure is the cause of the suffering. 756 [755] [782]

A *manang bali* is the highest rank to which a *manang* can attain and they are infrequent. "They are men who adopt and continuously wear woman's dress and behave in all ways like women, except that they avoid as far as possible taking any part in the domestic labour. They claim to have been told in dreams to adopt this mode of life; they are employed for the same purpose as the more ordinary *manangs*, and they practise similar methods" (Hose and McDougall, II, p. 116). Howell and Bailey say: "Even to the Dyak mind such a process is unnatural, and it is only undergone because of the command of the spirits who must be obeyed." These authors describe the initiation of a *manang bali* and state that after the ceremony "the *Manang Bali* apes the manners of a woman. He does all the work usually done by women. He sometimes even takes a 'husband' who is looked down upon by the community, and whose sole desire is to inherit his 'wife's' property as soon as possible. The *Manang Bali* may be said to have almost ceased to exist, among the down-river Dyaks, but the up-river people possess several recently made specimens!" (*S.D.D.*, 1901, p. 99). 756 838 [428]

292 X 531 The third row shows figures, the heads of which are labelled *pala engkaramba bekatapu*, head with war cap, wearing the feathered war cap, *ujok ujok katapu*. One of the carried heads is labelled *minching* (*labu*). *Labu* signifies a gourd, and it is possible that it is a gourd with holes for eyes and a slit for the mouth, which is used as a substitute for a head. The attitudes of the figures and the changed position of the heads in the last two rows suggest that they represent a head-hunting dance.

The fourth and sixth rows contain alternate male and female figures similar to those of the third row on the front of the jacket, but in these two rows there is below each figure a *kukut burong*, "claws of a bird". The males have a long line with curled ends passing through the glans penis, which [304 832 177] evidently represents a *palang*. According to Brooke Low (Ling Roth, *J.A.I.*, XXII, 1892 (1893), p. 45) the custom of perforating the glans for the permanent insertion of a short rod with a knob at each end, *palang*, was adopted by the Iban from the Kayans. The head of a male figure in the fourth row is labelled *pala engkaramba manang bali*, the head of a *manang bali*, and a male figure in the sixth row is called *engkaramba manang bali*.

The figures in the fifth row are labelled *gambar mensia*, but the head of one of them is called *pala engkaramba*, head of an *engkaramba*; these are essentially similar to the figures in the fifth row on the front of the jacket, except that they have no teeth.

The right sleeve has along its length five *engkaramba anak orang entepa* similar to those on the front and back of the jacket, and also designs: *tabor mata puna*, scattered eyes of pigeons, and *tabor bunga janggat*, scattered flowers of the white pumpkin. The two latter are also scattered over the left sleeve, on which are two other patterns which we do not recall having seen elsewhere.

292 [554] This is evidently a very special kind of *kalambi*, which we may surmise was worn only on particular occasions. Concerning the human figures it is interesting to find that "only women belonging to ancient and honourable families may make *engkaramba* and even they must begin by making other patterns" (Haddon MS.). The *Sea Dyak Dictionary* gives "*Engkramba*, a representation of anything cut out of wood". They are used to prevent harm from coming to crops, etc.

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may have been familiar with elephants. The point requires elucidation by local investigation.

The figures in the second row are also clothed in a chequered garment;

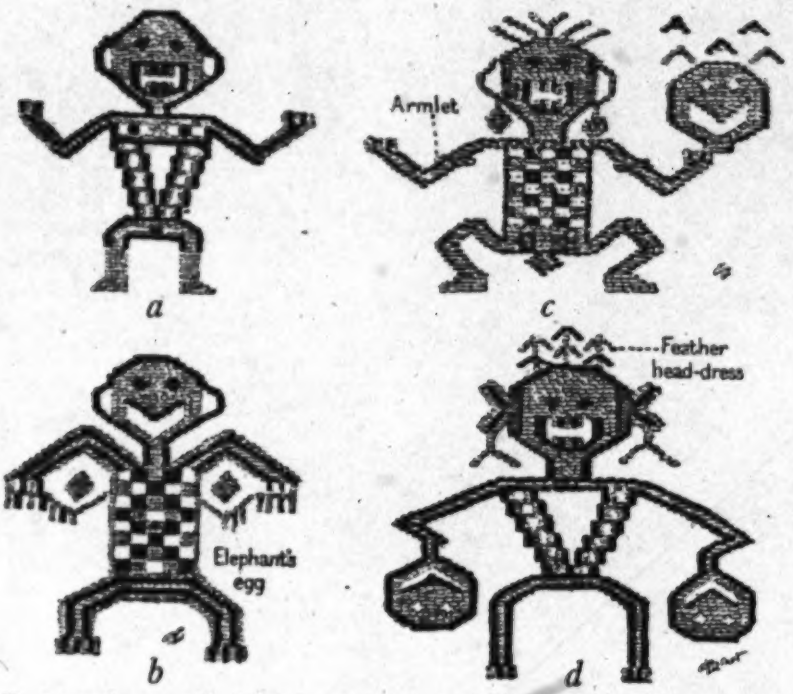

Fig. 22. Anthropomorphic designs on back of *manang bali* jacket 35.904: *a*, inner figure of second row on front of jacket, similar to the figures of rows 5 and 6, and rather similar to those of the fifth row on the back, though these have no teeth; *b*, first row of back, *gajah meram engkaramba* (*antu*), "man's ghost or spirit"; *c*, second row of back, *orang brani*, "brave man"; *d*, third row of back, *engkaramba bekatapu*, man wearing a feathered war-cap and carrying two old human heads, one of which is labelled *minching* (*labu*).

they wear ear-ornaments, perhaps feathers on their heads, and carry heads upright in their left hands (fig. 22, *c*). They are labelled *engkaramba* (*orang brani*), brave men. The possession of trophy heads is doubtless the reason for the adjective *brani*, brave.

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X 292 531 796 [776]

Of great importance, but very rarely observed in modern times, is the *gawai gajah*, "elephant feast", which can only be held by a particularly successful war leader who has obtained a large number of heads. Offerings and incantations are made to Singalang Burong, who is the God of the

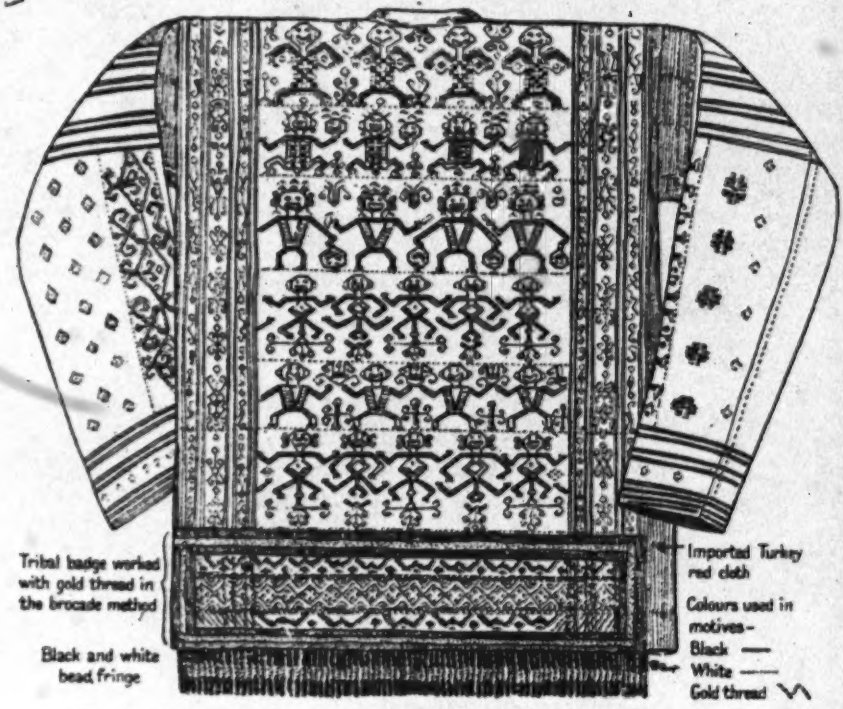

Fig. 21. Back of *manang bali kalambi* 35.904. Red cloth embroidered in black, white and orange, with a badge worked in the brocade method.

292 X 531 174

Heavens and of war. The wooden figure of an elephant is placed on the top of a long pole planted in the ground and to this figure offerings are made (Gomes, 1911, p. 215). It seems probable that the elephant motive is an imperfectly assimilated foreign conception—perhaps of Indian origin. It is, however, possible that it may be reminiscent of a time when their ancestors

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blue and not white as in all the others. The figures in the sixth row are labelled *gambar mensia*, representations of a person, or *engkaramba anak orang entepa*, a young man with outstretched arms, and presumably these names apply also to the other two rows. Only half of the face is embroidered in the outer figures of the second row (fig. 20, *a*) and this is labelled *jari engkatak*, hand of frog; probably some mistake has occurred. The human figures in the third row are alternately male and female and are on the whole similar to those in the fourth and sixth rows on the back of the jacket.

A narrow pattern of hexagons divides the third from the fourth row. It is labelled *kembong tikup*, to close a swelling; the stitchery was used to flatten a looseness or crease in the cloth, hence its name.

The figures in the fourth row (fig. 20, *c*) are labelled *engkaramba balu menyagu*, we do not know why they are termed "widower"; they appear to wear a large mask (Hose and McDougall, II, pl. 151, give a photograph of "Kenyah dayongs wearing masks"); the *dayong* of the Kenyah and Kayan are the equivalent of the Iban *manang*, they also are soul-catchers and play a large part in the ceremonies connected with death. We do not know what the wing-like extensions from the waist signify; perhaps they represent the swinging-out of the dress worn owing to a turning movement of the dancer.

Among the numerous designs at the sides of the jacket are: *burong lelayang*, a swallow (pl. IX, *b*); *burong jagi*, which may represent a bird in flight (pl. IX, *i*); *anak burong*, young bird (pl. IX, *j*); *kukut lang*, talon of a kite (pl. X, *h*) (but a somewhat similar device is labelled *daun entibap*, "leaf of the arenga palm", pl. XXII, *e*); other designs are: *burong buah bangkit*, *burong bekarong*, *burong sawang prut*, and *lelingkok semberai* (? *semerai*) *sungei*, zigzagging across a river.

There are six rows of human figures on the back of the coat (fig. 21). The first row shows each man (who has no teeth) wearing a chequered coat and carrying something under his flexed arms. The men are labelled *gajah meram engkaramba* (*antu*) and the object under the arm is called *telor gajah* (*telor* is the Malay word for egg) (fig. 22, *b*). There are no elephants in Sarawak, so the Iban are not likely to be acquainted with them, but wild elephants (introduced?) exist in north Borneo. The "egg" is obviously incorrect, but it may be a suggestion of something mysterious and belonging to the spirit-world.

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292 26 to 30 weft picks to the inch, but as three parallel, untwisted threads are
286 carried by the spool, there are really about 90 weft threads to the inch.

292 The chief interest of the coat, however, lies in the patterns and their meanings.

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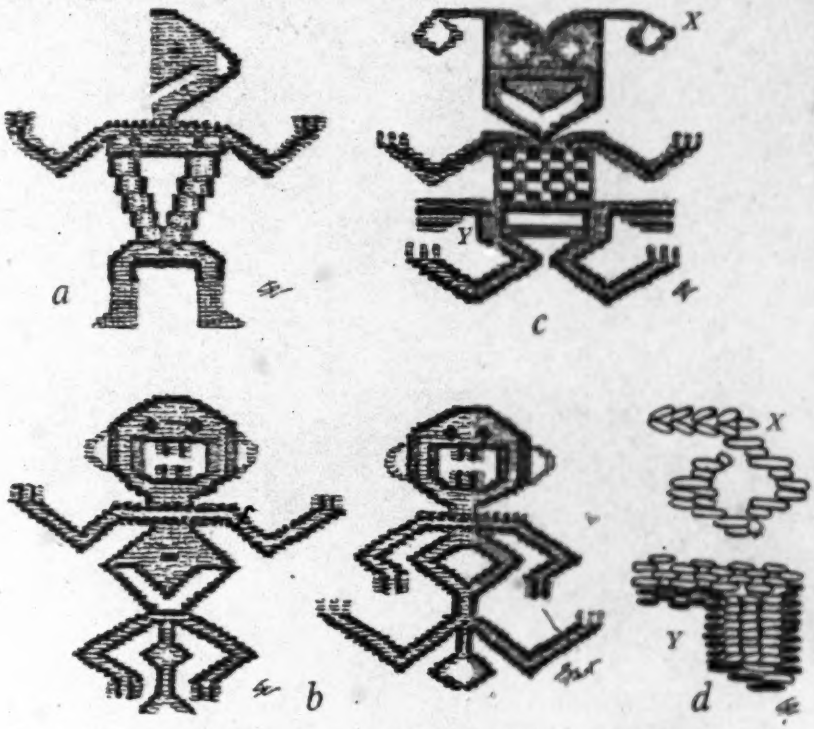

Fig. 20. Anthropomorphic designs on front of *manang bali* jacket 35.904: *a*, second row, figure with half a head and no teeth, see fig. 22 *a*; *b*, third row, presumably these male and female figures are *engkaramba manang bali*, "a *manang* who acts as a woman"; *c*, fourth row, *balu mnyagu*, "widower"; *d*, enlargement of parts of *c* showing arrangement of stitches.

The figures in the top row of the front of the coat (fig. 19) are labelled *kengkang kelabong*, this may be translated as striped scorpion. The human figures in the second row (figs. 20, *a*; 22, *a*) are very similar to those in the fifth and sixth rows, except that in the sixth row the legs are

ones of gold thread and the central one of white and red thread. The designs, which reproduce patterns plaited (*anyam*) in mats, are worked in the brocade method, i.e. the weft threads being loosely carried across the back of the cloth until needed to form a portion of the pattern.

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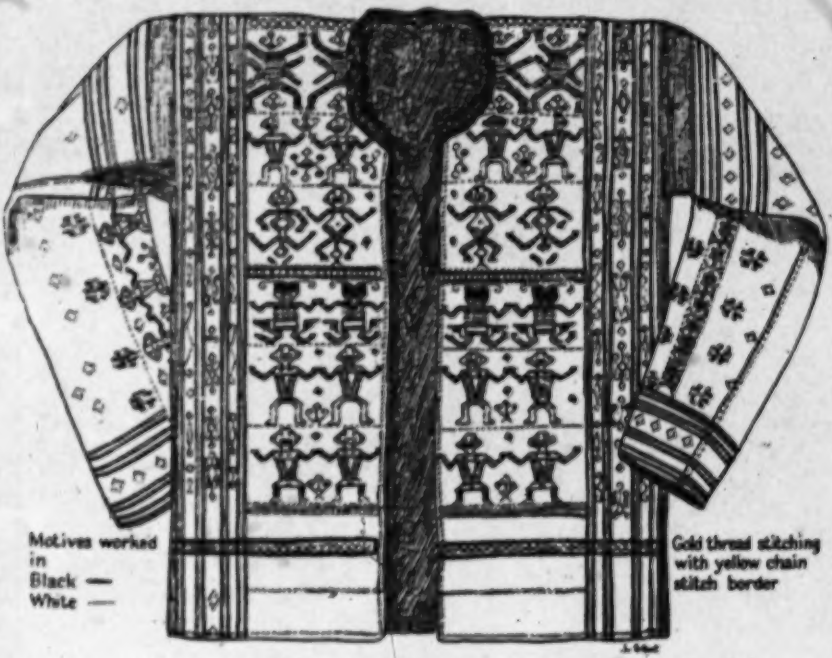

Fig. 19. Front of an embroidered *manang bali kalambi* 35.904.

At the bottom of the badge there is a fringe of black and white beads; the beads are threaded on the warp ends, which are then finished off with a knot.

The neck of the jacket is bound by printed cotton of foreign manufacture.

The cloth of which the jacket is made is, as usual, one with a warp surface, in which there are 180 to 204 ends to the inch, grouped in threes. There are

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Most of the back and the front portions of the jacket are elaborately decorated with anthropomorphic designs, and the sides are decorated with groups of coloured stripes between which are zoomorphs (figs. 19, 21).

These patterns, which are in blue, white and orange, may have been produced by either of two methods, embroidery or the use of free or floating spools. If spools have been used, a principle which is simple becomes elaborate in the actual working, for taking the white portion of each design, it seems to need two spools for its production, used in different ways, e.g. to work the outline of a lozenge one spool would be used for each side, but for a solid vertical line the two would be used alternately, the threads of one appearing above a throw of weft, the second below; the indigo parts of the pattern could be produced by single spools carrying a group of three or four untwisted threads.

If this is the method which has been employed, each pattern being picked out on the warp with the free spools, a wonderfully accurate effect has been produced.

The same difficulty would not be experienced if embroidery were the method adopted, and it therefore seems most probable that the needle was the only tool used. The fineness and regularity of the work are not at all out of keeping with other embroidered work, e.g. the *sirat* ends, and with the general accuracy of workmanship in other Iban crafts.

Whichever method was used, a fresh thread has been introduced for each little patch of colour and the reverse is exactly similar in effect to the obverse.

The garment is, in shape and construction, similar to those previously described, except that the whole of the coat appears to have been enlarged; the width has been increased by the insertion of a piece of imported red cotton cloth in the side seams, the sleeves have been lengthened by a similar insertion at the shoulder seam and both front and back have been lengthened by a piece 5 in. in depth—an argument in favour of the descent of the jacket from one person to another. On the front the joining has been concealed by a band of stitching, the centre being worked in gold thread with border lines of yellow chain-stitch. At the back the joining is hidden by the border of red and yellow flannel which surrounds the badge.

The badge (fig. 21) consists of three parallel, horizontal bands, the outer

remaung, "tiger-cats"; all are typical conventions of these animals. Between the spaces of the tiger-cats are various *burong*; *anak lachau*, "young grass lizards" (pl. XII, *e*); *engkatak*, "frog" (pl. XIII, *d*); and *igi bras*, "grains of uncooked rice".

The narrow vertical bands, which are transverse on the sleeves, contain various birds, including *kengkang lang*, "the striped kite"; *burong belingkian*, "argus pheasant", with its long tail feathers (pl. IX, *e*); *burong besugu*, "bird with comb" (pl. VII, *p*); *burong entepa*, "bird with outstretched wings" (pl. VII, *q*, *r*); *burong buah bangkit*, "bird on *bangkit* fruit" (pl. VIII, *c*), but this is very like a form of *burong entepa* and there is no indication of the conventional lozenge-shaped *bangkit* fruit.

It looks as if the cloth from which the back and sleeves of this coat has been made was originally woven for a *bidang*, but the front portions have characteristic *kengkang lang* in the two *burong* stripes and a very broad one between shrew designs which are covered on the outside with a band of red flannel. The only definite example of this type of *kengkang lang* on any *bidang* in our collection is 35.884.

Z.2342. This jacket is called "*kalambi ara*, striped coat", which is a very good description. There are broad white and dull indigo stripes at the sides and centre of the back and the space between has three narrow horizontally striped black and white bands with crimson stripes on each side of them, alternating with composite ones of all three colours about 1 in. in width. A very coarse needle-woven or weft-mosaic pattern of vertical lozenges in black, white, red and yellow decorates the hem at the back and this is finished off by a row of small tassels, consisting of bunches of cotton ends tied in with the bunched ends of the warps.

Z.2341. A woman's reddish brown coat with narrow simple and composite stripes of purple and white, having broader white purple and black stripes at the sides. There is a rather coarse pattern of triangles darned in white at the bottom of the back, edged with a row of double twining in black and white. The end of the back of the jacket is finished off with small cotton tassels in red, yellow, black and white, tied on by bunches of warp ends.

35.904. The red cloth of which this *kalambi* is made is finely woven and is 19$\frac{1}{2}$–19$\frac{3}{4}$ in. (48·8–49·5 cm.) wide, having groups of coloured warp stripes at each side.

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291 X531 The part of the cloth photographed (pl. xxvii) shows the variously coloured stripes, *surik ular kendawang*, which separate the alternate rows of *burong burak prut*, "bird with white breast" (cf. pl. vii, *e*), and *lachau*, "green grass lizard" (cf. pl. xii, *a*); the *lachau* are found only at the ends of the cloth, throughout the greater part of its length being replaced by *daun wi*, "leaf of ratan" (cf. pl. xxii, *k*). At the extreme ends of the cloth below the *burong* are designs which on other cloths are labelled *pemuchok tubu*, "bamboo shoots", perhaps with the head of a locust on the top of the shoot. At the top and bottom of the badge is a very narrow border of two yellow stripes separated by black and white spots; this is called *kelalin lantai*, interlaced cane; two similar horizontal borders separate the main patterns of the badge. The upper and lower patterns consist of a series of white and black triangles separated by a row of red and yellow triangles; they are labelled *lalat dabong igi labu*, fly, serrated or dog-tooth, seed, gourd. On other parts of the cloth are *burong lelayang*, swallow, *burong mansau prut*, "bird with red breast", *daun entibap*, "(isolated) leaf of the *arenga* palm" (see pl. xxii, *a–e*). The *kengkang lang* (p. 33) is especially prominent. The broad central pattern has two zigzags, *lelingkok kelalin lantai*, zigzag interlaced cane, which divide the band into triangles and lozenges, which are filled up with white, yellow, red and black triangles, all the last having a gold thread centre; within the lozenges are black designs enclosing red and yellow triangles; these are labelled *buah belimbing*.

291 286 35.908. This is a jacket of somewhat unusual colour; its edges are bound with red flannel, and there is no badge on the back. Width, 21 in. (53·4 cm.); length from shoulder to hem, 22 in. (55·9 cm.).

The warps are paired throughout the cloth except in the pale brown and yellow self stripes, where a coarser yarn has been used in the former, the latter being crowded together. There are 60 groups to the inch, i.e. 120 ends and 24 picks of weft to the inch.

291 X531 The background is dark red in tone with patterns in light brown with darker markings of red and dark brown. There are two narrow patterned borders at the sides of the cloth, each divided from the other and from the central pattern by coloured warp stripes representing the snake, in red, yellow, black and pale brown, repeated twice.

On the front of the jacket are *aji*, shrews, and the back is covered with

35.910. This is a well-made typical *kalambi* bound at the top with a narrow and at the sides with a broad band of red flannel. The lower edge has a strip of red and of yellow flannel and about 2½ in. above this are similar strips. At the collar is the silver-gilt button shown in fig. 11, *b*.

Among other devices in the broader vertical stripes are *burong burak*, "bird with a white breast"; *burong bekinkiang*, crooked *burong*; *burong pemiyaiarbong*; *burong trugu* and *langkiang*, a lizard with a long reflexed tail. The narrower stripes contain lizards, ratan, and other devices usually found in such stripes. A prominent feature in this and the next jacket is the occurrence of *kengkang lang* in the centre of all the vertical stripes on the front of the jacket. The badge is illustrated in fig. 9.

35.909. This is a new *kalambi* which apparently has never been worn, and there are no labels attached to the patterns. Stripes composed of two black lines edged with white in a rather broad red band separate the broad stripes containing birds from slightly narrower stripes in which are thick white zigzags with black spots. On the lower border of the back is a band or badge of chequer-work: yellow bands slope in one direction and red bands in the other; where they cross each other is a black square, the interspaces being white. Above this is a horizontal row of coarse double twining in brown and white.

35.902. On the body of this man's jacket there are self stripes in the colours of the *kendawang* snake, dividing patterned ones filled with birds. At the bottom of the back two rows of coarse double twining in black and white, about an inch apart, are outlined by and enclose a sparsely worked lozenge pattern done in gold thread.

35.919. This is a piece of cloth 8 ft. long made for a *kalambi* with sleeves, just as it is when taken off the loom. The photograph (pl. xxvii) shows only one-quarter of the length, but it will be seen that the length is continuous as the warp ends joining the part where the badge has been worked in and those of the other end of the cloth are uncut. Fragments of a thin strip of bamboo, used as a laze rod (fig. 4), still remain near the beginning of the pattern and can be seen near the bottom of the photograph. Below the needle-woven badge are two coarse threads which have been used to group the warps for the stitchery. The cloth has self-coloured stripes of white, scarlet and yellow alternating with patterned ones.

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291 The warp is paired, with odd groups of three in the coloured stripes,
286 and there are 112 ends to the inch; the weft is threefold and there are 22 picks to the inch.

291 The patterned stripes have a brown background with white motives and
X 531 these are separated from one another by grouped warp stripes of red, yellow, brown and white, which vary in width from $\frac{1}{8}$ in. (9 mm.) to $\frac{11}{16}$ in. (1·7 cm.).

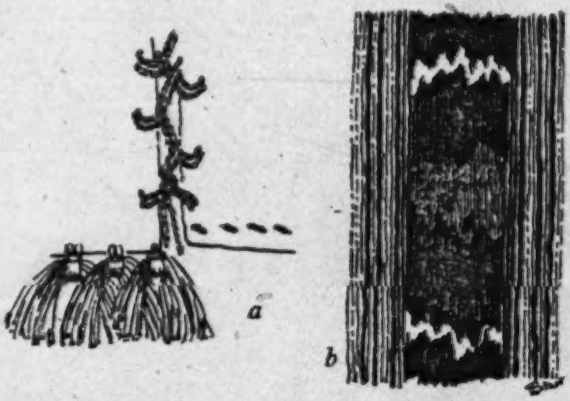

Fig. 18. Details of bird *kalambi*: *a*, tassels at end of seam, 35.905; *b*, *kengkang lang*, 35.907.

The narrower of the vertical patterned stripes have repeats of *anak lachau*, young grass lizard, similar to pl. XII, *a*; they are separated by variously coloured groups of, or compound, stripes, *surik rinik*, from the stripes decorated with birds, such as *burong bekarong*, "covered or concealed birds" (pl. VII, *j*); *burong enchoyok* (*tinggang ujan*)—the words in brackets indicate that this *burong* is associated with falling rain (pl. IX, *h*, and *g* seems to be a variant); *burong buah bangkit*, "bird on *bangkit* fruit". The designs on the front of the jacket also include *kengkang lang*, "striped kite". At the bottom of the back of the jacket are designs labelled *lancham pemuchok tubu*, "pointed bamboo shoots", pl. XVIII, *g*.

In giving names to the patterns on this cloth the owner described it as *satu macham bekarong samoa*, "a good kind to cover anyone", and also said *enggo lachau samoa*, "to wear a lizard all or everyone". The grass lizard is one of the lower rank of omen animals.

a black ground; it is labelled *dabong igi labu*, serrated seed of gourd. The black and white band between this and the broad band is labelled *kelalin lantai*, interlaced bamboo. The double zigzag of the broad band is called *dabong lelingkok*, the triangles are labelled *lalat dabong lancham*, fly, serration or dog-tooth, pointed; the central designs are termed *lalat ketupang lensat*, (*lalat*, fly, *ketup*, to bite; *lensat* is a "fruit-bearing tree, *Lansium domesticum*", *S.D.D.*); this appears to mean a fly biting *lensat* (fruit).

The patterned stripes measure ¾ in. (1·9 cm.) and ¼ in. (6 mm.) alternately and are divided by compound solid colour stripes in the order: red, orange, indigo, white, indigo, orange, red, each ¼ in. (1·6 cm.) wide and intended as a whole to represent the black, white and red bands of the *kendawang* snake (*Cylindrophis rufus*). The composite stripe is labelled *ara surik kendawang*, see p. 29. Amongst the birds figured in the broader patterned stripes are: *burong betampong*, "a ceremonial bird which cures sickness" (pl. IX, *d*); *burong bekarong*, "a hidden bird", similar to examples on pl. VII, *i–k* and *burong sawang prut*, "a bird with a hole in its breast" (pl. VII, *g*). All the narrower patterned stripes contain *daun wi*, "*ratan leaves*", very similar to those drawn on pl. XXII, *l*, *m*.

About two-thirds down the front of the jacket there occurs in all the patterned stripes a very interesting blurred design, which consists of a brown blank space with an indistinct lighter smear in its middle; above and below is an irregular wavy line (fig. 18, *b*). This is labelled *kengkang lang*, the striped kite: "the kite, according to Dyak belief the bodily shape and form of *Singalang Burong*, the Bird King, who, upon one occasion only, appeared on earth in human form but has since adopted the shape and form of the kite" (*S.D.D.*). The formless mass may be a naïve way of acknowledging the impossibility of depicting the Supreme Being.

35.905. A bird coat. This old "*Baju burong*" probably belonged to a Skarang Dayak, as some of the names of designs used are given in that dialect; and it is not so well finished as other examples of similar coats, having no badge or flannel binding. The side seams are joined by a form of blanket-stitch worked from side to side (fig. 18, *a*), which when closely done looks like the backbone of a fish and so is called *jayit tulang ikan*. Three little tassels, *kelapong leka*, made of the coloured warp thread finish off the end of the seam (fig. 18, *a*).

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with a gold weft and a small scalloped edge. The braid is composed of purple, yellow and white warps brightened by the faint glisten here and there of the weft. In weaving the braid, three spools, each carrying two gold threads, appear to have been used in rotation, the thread being interlaced at the edge (much in the same way as baskets are often finished) and forming tiny

Fig. 16. Details of badge braids of *kalambi*, 35.907.

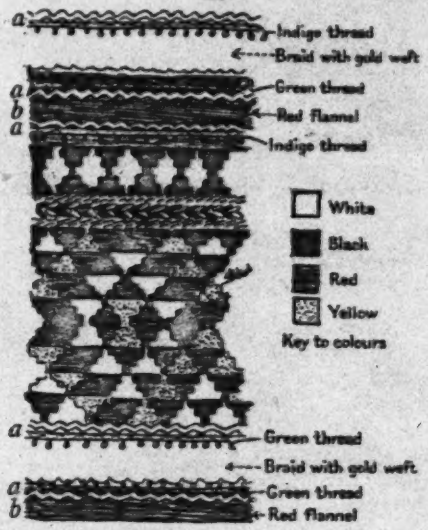

Fig. 17. One repeat of the pattern worked on a badge of a *kalambi*, 35.907, by the tapestry method, with added borders.

scallops. The method of interlacing is drawn in fig. 16, *a*. The native name for the braid, *lilit*, signifies "gold embroidery" or "to warp or bind with gold thread".

A single motive of the pattern in the badge is drawn in fig. 17; there are 11 complete and one partial repeat of this in the width of 17⅛ in. (43·5 cm.). The design is executed in red, white, yellow and black in the needle-weaving or tapestry method; the similarity of the pattern to that in cloth 35.903 is noticeable and possibly indicates that the original owner was a Saribas Iban. At the top of the badge is a band of white stepped lozenges on

running stitches. The yellow and scarlet flannels are foreign and probably of British origin. 531x 241

The central pattern of the badge (fig. 14) is labelled *pantak lelambak*, "wasp and flower pattern" (pl. XVII, *f*); it is enclosed within two zigzags called *lelingkok kelalin lantai*, zigzag interlaced bamboo. The black and white border within the triangles caused by the zigzag are labelled *dabong betangkal*, serrated notch (pl. XXIV, *f*). The upper border is labelled *lalat tisik tengiling* (which appears to signify a fly scraped off the scales of a *Manis javanicus*) and the lower border, *dabong telik leka labu*, serrated seed of gourd, *Cucurbita lagenaria*; perhaps the hour-glass-like red and black lozenges represent a constricted gourd, but *leka* signifies seed, grain. 286

A *kalambi burong* is considered one of the best kinds of jackets to possess, as many of the patterns symbolize ritual birds, possessing some special protective virtue. 291 531x

The Iban are great observers of omens, always consulting them before beginning any important undertaking. The bird omens are the most numerous and important; the omen birds are supposed to be the sons-in-law of Singalang Burong and come from the spirit world as his messengers. 787

35.907 A *kalambi burong*. A striped cloth jacket similar in construction to the bird coat previously described has an analogous badge at the back, but the dyed designs and details of decoration are different; they consist mainly of birds. 291 531x 286

The warp is grouped in threes in the solid colour stripes and in pairs in the patterned ones and averages 148 ends to the inch. The weft is brown and three threads are carried across each pick, tape-wise or parallel, having been previously wound on the spool in that manner.

The coat is bound round the edge with red flannel as in the previous cloth, but it and the badge at the back have also a bordering of a narrow white braid of European make which is usually used in Europe as a foundation for crochet work. Probably the chief value of the braid lies in its zigzag pattern, which was produced in the previous coat by snipping pieces out of the edge of the woollen material; further ornamentation has been added to the braid in the shape of a little looped stitch or picot (fig. 16, *b*), worked either in green or indigo.

A charming addition to the red border at the back is a hand-made braid

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abelled *ara belambang*. *Ara* also signifies "spread out", which is probably its meaning in this case; *belambang* means "irregularly", which adequately describes these two stripes, as some of the colours are broader than others.

The interesting badge (fig. 14) at the back of the jacket has been produced by needle-weaving and has been worked in upon the bare warp while that was still on the loom. The colours used, red, white, yellow and black, are indicated in the figure, which shows one-half of the badge.

The warp threads are grouped into bundles of about fifteen by the first two rows worked. The long parallel horizontal and curved lines of the design at *b* and *c* (fig. 14) are worked first, the effect of slanting stitches and an alternating black and white plait being obtained as shown in fig. 15 where the black thread shows the first row of stitches and the white the returning row. It will be noted that the threads cross one another alternately with the warp secured between them, as in twining, so that the wrong side is just the reverse in colour to the right. Four rows of stitches would be necessary to produce the effect of the plait in the figure, or two needles might be kept working alternately and the result produced by two rows of work. After the completion of these long lines the intervening spaces are filled in with lozenges and triangles in red, yellow, white and black, each motive being completed before the next is begun. The stitch used is like darning; an enlarged detail is shown in fig. 8.

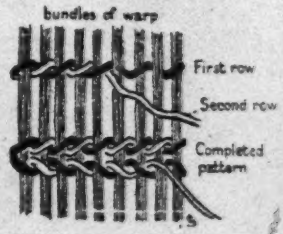

Fig. 15. Plaited or twined lines in badge, 35.903.

As will be seen from fig. 14, the pattern is one which, consisting chiefly of slanting lines, does not exhibit the usual weakness of the tapestry or needle-weaving method, i.e. gaps such as are produced when vertical lines are worked, except at the ends where variation of the central design has caused a long open slit *A–a*. This has been joined afterwards by string, the lacing stitch used for the side seams being the method adopted. The whole badge is surrounded by a vandyked border of yellow woollen material, *keselat lilit* ("*lilit*, gold embroidery on the edge of a handkerchief", *S.D.D.*), edged with scarlet flannel, secured by coarse white

give a solid colour effect the cloth is of a still closer texture, because the warps are grouped mainly in fours instead of threes and there are as many as 176 ends to the inch; this greater closeness of texture enhances the colour effect.

The patterned stripes have white motives (undyed yarn) on a reddish brown background, the dye being obtained by the Saribas women from mangrove bark; parts of the designs are emphasized by deep sepia brown obtained by a second dyeing of indigo over the red-brown.

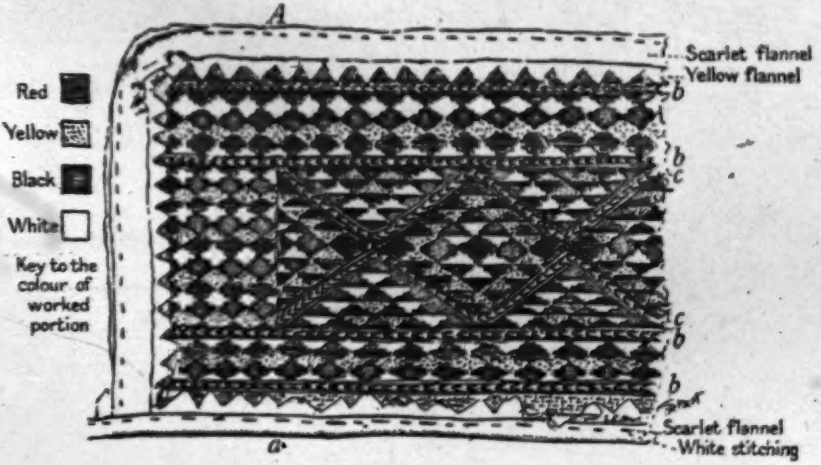

Fig. 14. Badge at the bottom of the back of *kalambi* 35.903, worked in the tapestry manner on the bare warp.

A portion of the repeat on the back and sleeves is shown in fig. 13, which represents: *d*, *daun wi*, "a ratan leaf" (pl. XXII, *m*); *e*, *sayap burong lelayang*, "the wing of a swallow or swift"; *f*, *sugu*, "a comb" (pl. XXIV, *g*); and *g*, *lachau*, "a green grass lizard" (pl. XII, *f*). At the bottom of the front of the coat is *burong buah bangkit*, "bird with the *bangkit* fruit" (pl. VIII, *a*).

Stripes of various colours are termed *ara* and these particular ones are labelled *ara ular kendawang*; *kendawang* is "a snake, *Cylindrophis rufus*, with a red head and a red tip to its tail, body striped black, white and red. It is said by the natives to be poisonous" (*S.D.D.*). Two broader stripes are

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294 edges thus produced are joined by a coarsely sewn counter hem, i.e. each edge is turned under once and the raw edges, being placed upon one another, the folds on either side of the garment are felled or hemmed down (fig. 12, *c*). Openings are left under the armpit both in the sleeve seams and the side seams of the jacket, which are joined by a lacing stitch worked from side to side with a cord-like thread made from pineapple fibre (fig. 12, *d*). The sleeves are seamed on with the same material and all the remaining raw edges of the garment are bound with narrow strips of imported scarlet flannel, secured by a coarse tacking stitch (fig. 12, *e*) or in some parts by a hemming stitch.

286 X531 The material used in making the garment is an excellent example of warp-pattern dyeing. Groups of coloured warp stripes (fig. 13, *a*) in red, yellow, black, white, red, white, black, yellow, red, amounting in all to a compound stripe $9\frac{1}{16}$ in. (23 cm.) wide, separate the patterned stripes (fig. 13, *b*). The latter vary in width, being alternately $\frac{1}{16}$ in. (8 mm.) and $1\frac{1}{16}$ in. (2·6 cm.); there are 88 to 132 warp ends to the inch, grouped in twos and threes, and 20 to 22 picks of weft, each of which consists of three parallel threads.

In the coloured warp stripes which

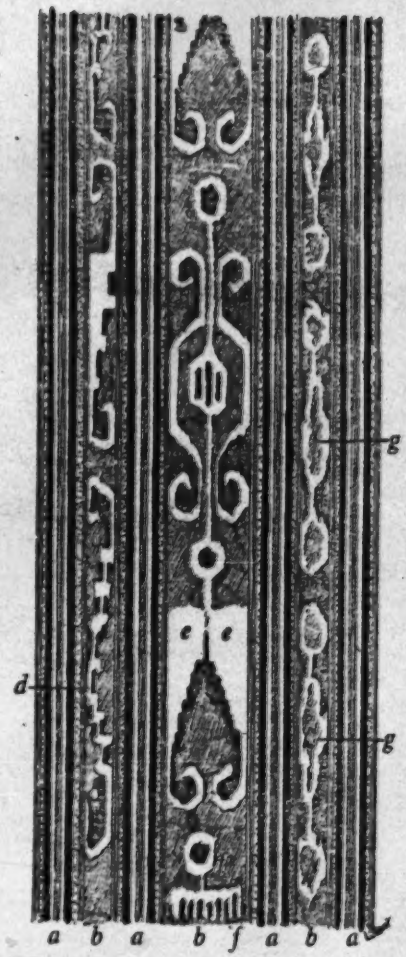

Fig. 13. Pattern repeat on back and sleeves of *kalambi* 35.903: *a*, solid colour stripes; *b*, pattern stripes; *d*, *daun uri*, "leaf of ratan" (see pl. XXII, *m*); *e*, *tayap burong lelayang*, "wing of swift, *Collocalia fuciphaga*"; *f*, *sagu*, "a comb"; *g*, *lachau*, "the green grass lizard".

opening and a V-shaped piece cut for the neck, the piece of cloth thus cut being turned down to form a double thickness at the back of the neck, which 294

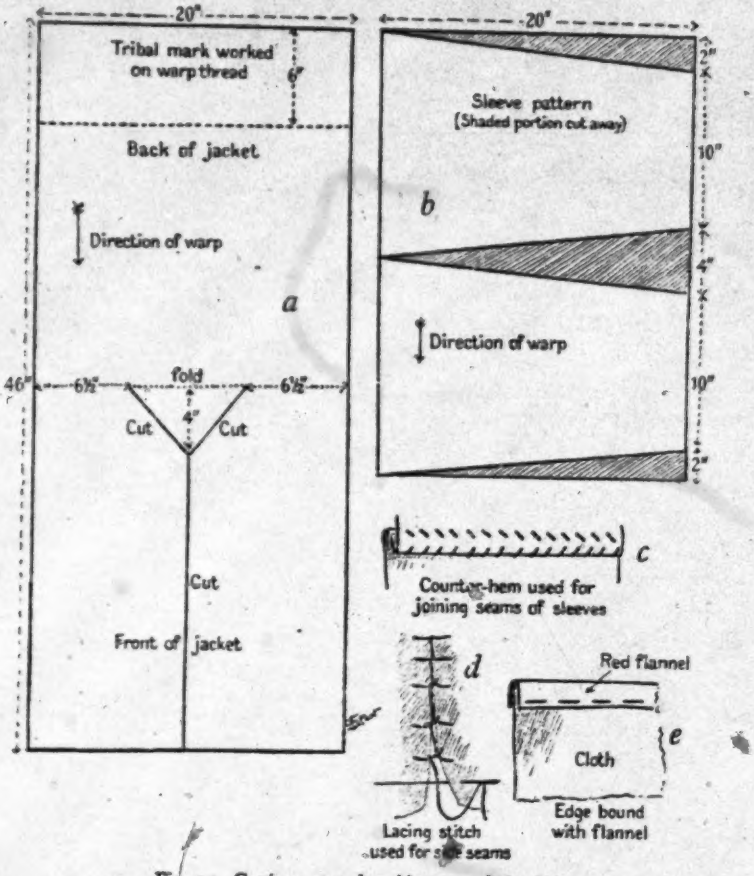

Fig. 12. Cutting out and making up a *kalambi*.

is then hemmed in place. The sleeves are shaped by having a portion cut away from each side so as to make the wrist 4 in. narrower than the part joining the body of the jacket at the shoulder (fig. 12, *b*), and the two raw

inch is 22. The colour of the weft is often red and sometimes a dull white, instead of the almost universal brown used in the other cloths.

In addition to the native yarns, some doubled white yarns, either imported or mechanically spun, are used, especially for embroidery and badges. The gold and silver thread used in the latter, and less frequently as an embroidery thread, is obtained from the Malays or Chinese.

The method of cutting out and making up a *kalambi* with sleeves is given in detail for cloth 35.903. All jackets are made up in the same way, except that there may be a variation in the amount of slope cut away for the sleeve.

In making up, a lacing stitch or some type of open stitch is usually used for the sides (fig. 12, *d*), but a counter hem is the method adopted for joining the sleeve seams, which are always left open for an inch or two under the armpit.

The fastening of the coat may be a piece of fine twine attached to one side and wrapped round a thorn stuck through the cloth on the other edge (fig. 11, *c*), or it may be a button, varying from a beautifully worked silver-gilt one of native manufacture (fig. 11, *b*) to an European shirt button or a crudely shaped piece of wood (fig. 11, *a*).

Occasionally ties are made on either side of a coat consisting of twine. The ends of the ties may have a number of small squares of red and yellow flannel threaded on them (fig. 11, *d*).

The *kalambi* are described in the following order:

35.903	35.909	Z.2342	35.901
35.907	35.902	Z.2341	35.911
35.905	35.919	35.904	
35.910	35.908	35.906	

THE IBAN JACKET

35.903. A Saribas jacket. This cloth is a fine specimen of a *kalambi burong*, "bird coat", with a badge worked in at the bottom of the back in the tapestry method, i.e. needle-woven upon the stretched warp.

Length of cloth before folding or sleeves cut from it about 6 ft. (182·9 cm.); width varies from 19½ in. (49·5 cm.) to 20 in. (50·8 cm.).

The manner in which the coat has been cut from the length of cloth is best seen in fig. 12, *a*, which shows how the front width is divided for the

The cloth woven for jackets is nearly always firmer to feel and finer in texture than that made for the *bidang*. This is mostly due to the fact that the finer warps are used and the number may vary from about 100 ends an inch in a cloth of moderate quality to 272 in a finely woven one, and the ends

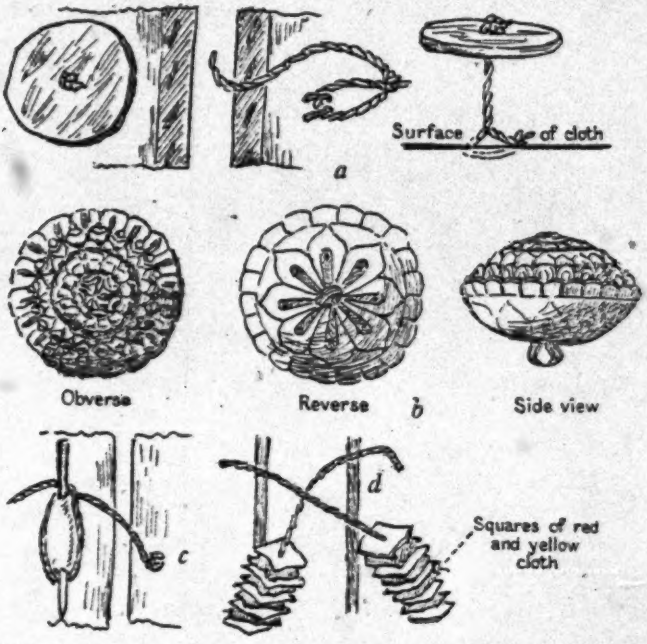

Fig. 11. Methods of fastening *kalambi*: *a*, wooden button and string, 35.911; *b*, silver-gilt button of local workmanship, 35.910; *c*, thorn and string, Sakaran Iban (Ling Roth, II, p. 32); *d*, two strings with ornamented ends, British Museum (No. +7010).

are usually paired or sister warps. Just as in the *bidang* cloths, where solid colour stripes appear it is usual to find more ends to the inch than in the main body of the cloth.

The weft is often threefold, occasionally four, and the strands are wound tape-wise on the spool. (The Javanese use a similar method of making a wide weft, as can be seen in the spool thread in a Javanese loom belonging to the Manchester College of Technology.) An average number of picks to the

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[E.284]

No. of cloth	Width	No. of warp ends to inch	Analysis of weaving in *kalambi*			Notes
			Description of warp	No. of weft picks to inch	Description of weft	
35.903	1 ft. 7½ in. (50·1 cm.)	88–132 ends (44 groups) 132–176 ends (44 groups)	Paired and threes in pattern stripes. Fours and threes in self-coloured stripes	20–22	Brown Three parallel threads	Pattern stripes have had three dyeings: light brown, deep red brown, indigo on red brown (vandyke)
35.904	1 ft. 7½ in. (48·8 cm.)	204 ends (68 groups)	Triple warps throughout Very fine yarn	26–30	Two spools used alternately and threads cross at edge of cloth. Three, occasionally four, parallel threads of finely spun yarn; red in colour	One of the most finely woven cloths in the collection. The warp and weft are both red except in the border stripes, when yellow and dark blue warps are used. The patterns are embroidered with a double thread of white or three threads of black
35.905	1 ft. 7½ in. (48·8 cm.)	112 ends (56 groups)	Paired, odd groups of threes in coloured stripes	22	Three parallel threads. Greyish white	Colour dull, a greyish white pattern on dull vandyke ground. The cloth is striped right across its width, pattern stripes being divided by groups of red, white and brown stripes
35.906	1 ft. 9½ in. (44·4 cm.)	272 ends (68 groups)	Four parallel ends in each group	22	Red. Four, six or eight threads with a slight twist which appears as parallel in the shed	A finely woven red cloth with solid white, black and yellow stripes at the sides. The patterns are embroidered in dark blue and white with a twisted or doubled thread for the white and a fourfold untwisted thread for the blue stitches
35.907	1 ft. 7½ in. (49·5 cm.)	112 ends (56 groups) 192 ends (64 groups)	Paired in the pattern stripes Threes in self-colour stripes	20	Brown. Three parallel threads	Pattern stripes of white with brown ground alternate with composite stripes of black, white, red and yellow, and extend right across the width of the cloth. Faded

Two methods are used in the production of these badges, either a form of needle-weaving or weft-mosaic, or the brocade method. Both have been described under the heading "The making of patterns other than warp-dyed" (pp. 15, 17). 291 286 531X

Pure embroidery is used as a means of producing pattern on some of the woven cloth jackets in addition to the badges. The elaborate designs frequently worked on bark-cloth jackets serve, however, not only for decoration but also as a strengthening device, as the stitching is mostly done in a horizontal direction in order to make the longitudinal fibres firmer (fig. 1). 291 531X

According to Mr Leggatt (Notes) "the dresses of the Sarebas are the best embroidered as they are the cleverest in all needlework".

Further ornamentation is also provided by the use of fabrics of foreign manufacture; English red and yellow flannel, Chinese printed cotton and silks, are used as narrow edgings to the badges and for making neat the cut edges at the front of the coat and the neck. Gold thread obtained from the Chinese and Malays is sometimes introduced in the working of the badge and also to a very slight extent in the pure embroidery; Brooke Low (Catalogue) says that "the *kalambi subang* manufactured by the Sarebas is of a finer and closer texture than any other and therefore more expensive. The thread of which it is wrought is procured from the Malays and is of a red colour". 291 531X 439

Fringes of beads or hawk-bells occur on some of the finer examples and a short twisted fringe of warp ends is left on others, whilst small tassels of coloured threads are occasionally used to make a neat finish to a side seam (fig. 18, *a*). 291 531X

Most of the *kalambi* are, however, made of cloth with a warp-dyed pattern, and those decorated with good omen birds are greatly prized and are worn on such important occasions as the beginning of house-building, and the first planting of paddy, whilst others with sacred birds have value as a cure for sickness. It is probable that these special uses of *kalambi* for ceremonial purposes have led to their more elaborate treatment. [755]

The Sakarang wear jackets without sleeves and some tribes have a striped cloth, that is, there are narrow warp-dyed stripes alternating with plain colour stripes across the whole width; see cloths Z. 2341, Z. 2342.

386 463 usual fee being a small jar (*tepayan*), a sacred stone (*plaga*), a small bell (*grunong*), and a brass ring (*chinchin tembaga*). Some of the 'professors' affirm that they learnt the art from the fairy goddesses such as Kumang, Indai, Abang, etc. With some Sea-Dayak tribes they even go so far as to make offerings to these goddesses, asking their help in the difficult work of dyeing the cotton red (*ngar*, or *nakar ubong*). The woman who undertakes this particular kind of dyeing, first of all gets a piece of steel which she bites in order to strengthen her soul. This steel is called *kris samengat*. They make a great deal of fuss over the work of laying out the thread on the platform (*tanjeu*) and the business of it is called the *kayau indu*, or 'warpath of the women'."

"The Sea-Dayak bachelor in order to win the affections of a maiden must needs get a head first, similarly the Sea-Dayak maiden to win the affection of a bachelor must needs be accomplished in the arts of weaving and dyeing."

In the following pages we describe the specimens in the Cambridge Museum in the order of *kalambi*, *bidang*, *sirat*, *bedong*, *dangdong* and *pua*.

KALAMBI, JACKETS

291 286 The *kalambi* or jacket is a garment worn by both men and women; the former, however, only use it on full-dress occasions, when a *dangdong* or shawl is also thrown over the shoulder. The women do not usually wear a jacket when in the house, the *bidang*, or petticoat, and *rawai*, or corset of brass rings threaded on ratan circles, alone being worn; they don the jacket for out-door pursuits or for special occasions.

The men's and women's jackets are alike in material and shape except that the women's is usually a little longer. The jackets are made of bark-cloth or woven fabric; the latter type only is here described.

291 286 X 531 The method of weaving is exactly the same as for the *bidang*, and similar coloured stripes are introduced at the edges of the cloths, which average just under 20 in. (50·8 cm.) in width. It takes a whole length of cloth for a jacket with sleeves. If the garment is to be decorated with a badge at the back, this is worked on the warp threads before the cloth is removed from the loom (pl. xxvii).

The Iban usually dye the background colour first, whether it be a light or reddish brown, reserving the pattern so that it appears light or white; darker spots and other colours are the result of a second dyeing. 386 314

W. Howell (1912) says that *kain chelum*, black cloth, is obtained by dipping the cloth into *engkerbai* water for a night; after washing and drying it is soaked in *tarum* water (indigo). *Kain mata* or *ubong mata*, the unripe cloth or unripe thread, is the undyed material.

The thread of *kain engkudu*, "the red cloth", is called *ubong embun* because it has to be exposed to the dew, *embun* (*ambun*), for so many nights, the exact length of time depending on the woman who conducts the operation. The dyeing of the *kain* or *pua mansau*, *engkudu* or *embun* is done in the following way: "After being first dipped in saffron water, *kunyit* [turmeric], it is subjected to the following concoction: (i) *kapayang* oil, made from *kapayang* (*Pangium edule*) seeds burnt and pounded in salt, and for proper preservation there should be plenty of salt; (ii) *klemintin* fruit; (iii) *klampai* fruit; (iv) *engkringan* fruit; and (v) ginger, all burnt and pounded in the same way. These are carefully measured out with a cocoanut shell in the correct proportions, and are then put into a wooden trough containing cold water. After this concoction has been well stirred and mixed the thread is dipped into it for twenty-four hours, during which time great care is taken to see that it is well saturated. It is then taken out and stretched on a mat for twelve hours and afterwards put out on the outside platform (*tanjeu*) for sixteen days, so that the sun and dew may complete the process. It should be noted that although dew is apparently regarded as a necessity, great care is taken to prevent the newly-dyed thread from getting wet from rain, and on the slightest suggestion of a shower, either by day or night, the thread is taken into the house. After eight days on the *tanjeu*, the thread is turned, so that the other side may receive similar treatment for the remaining eight days. The dyed thread is now washed, dried, dipped in rice gruel, combed and rolled into balls ready for weaving." 386 314 463

"The mixing of this particular dye is supposed to be very difficult and perhaps only one in fifty knows much about it: The woman who becomes the recognized authority on this subject takes the name of 'Orang tau nakar tau ngar', which means 'She who knows the secret of measuring out the drugs in order to obtain the rich colour', and for this work she is well paid, the 386 463

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conjunction with an alkali. The Javanese use this wood together with alum in dyeing their *batik* patterns. An aqueous solution of the wood if heated with an alkali gives a beautiful blue.

Blue is usually obtained from the leaves of various species of *Indigofera*, which are soaked in water for 12 hours. During this time bacterial fermentation takes place and begins to form a yellow liquid which is run off. This is areated by agitation; it first turns green and then blue.

If the leaves of the *Indigofera tinctoria* are used the presence of an alkali is necessary in the water, as the glucoside which is contained in them splits up into indigo and sugar, and without the alkali the indigo is insoluble in the water. Under the right conditions it becomes indigo white, which oxidises on exposure to air into indigo blue.

Ling Roth (11, footnote p. 37) quotes von Donop's reference to a small shrub called *home*, the leaves of which resemble *Cinchona succirubra* and are sometimes used in place of indigo; the leaves are boiled and the cloth immersed in the liquor.

The scarlet yarn used in the self-colour stripes is generally procured from the Malays, but a brilliant red is also obtainable from the ratan *jernang*. The dye is made from the scales which cover unripe fruit of this species of ratan ("*Calamus didymophyllus*, or, perhaps, *Damonorops draco*, called Dragon's blood", *S.D.D.*).

Green is obtained by over-dyeing a yellow with light blue, either indigo or that obtained from an alkaline aqueous solution of jack-wood (*Artocarpus integrifolia*). In the latter case both colours, the yellow and the blue, might have the same source.

A black dye can be made from the large juicy leaves of a Melastomacea (*Medinillopsis Beccariana*). Beccari (1904, p. 277) says that the Tubao Kayans use the juice of these leaves to blacken their teeth.

The effect of black can also be secured by over-dyeing indigo on a red-brown. The latter method appears to be the one most frequently adopted by the makers of the cloths in the collection.

The *S.D.D.* gives *ladu*, mud found in down-river streams and used as a black dye for petticoats.

When any yarn has been dyed it is spread out in some shady place to dry.

are illustrated. Gomes, 1911, pls. pp. 52, 128. Hose and McDougall, 1912, I, pp. 221, 223, drawing of a *bidang*, fig. 61, photographs of *pua*, pls. 131, 132; owing to the process employed in reproduction the positions of the women are reversed in plates 118–121, thus the right hand appears to be the left hand. In Hose, 1926, they are shown correctly in the pl. facing p. 182; photograph of part of a *pua* and of a *bidang*, pl. p. 183.

DYES

The range of colour used by the Iban in dyeing their cotton yarn and tied-up webs is limited; shades of brown, from a pale buff to a vandyke, most frequently form the backgrounds to the patterns; the most effective is a reddish brown; brown is also the usual colour of the yarn used as weft.

For the brightly coloured stripes, generally found near the selvedges of the cloths, yarns dyed red, yellow, black, pale blue, or green are used, and sometimes an unusual effect has been produced by dipping a cloth which already has such stripes in an indigo bath.

All the dyes used in the cloths described are vegetable in origin and either act by oxidization or in conjunction with some simple alkali, such as wood ash or alum. Hose and McDougall (I, p. 222) say: "lime and gypsum are sometimes mixed with the watery extracts as mordaunts but these are probably modern refinements"; but Perkins and Everest (1918, p. 463) state that "at an early date in India and the Far East such other mordants as naturally occurring sulphates of aluminium and iron were used".

The rich reddish brown so successfully exploited by the Iban is obtained from the bark of the mangrove or of the *samak* tree and is a favourite colour with the Saribas women, who make the best fabric. A dark purple is obtained from the leaves of the *tarum* (indigo) plant. Many shades of duller brown are obtained from the *pinang*, *Areca catechu*, which may also be used as a mordant for other dyes. The catechu is dissolved in boiling water, the yarn is immersed in the hot bath of liquid from a half to a full hour for light shades of brown and steeped overnight for dark shades. The colour is developed with the liquor obtained from wood ash.

Yellow is obtained from turmeric and wood of the Jack-tree (*Artocarpus integrifolia*), known to the Iban as *pedalai*. This wood is rasped and used in

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Another way in which a different colour effect is produced is by means of weft stripes, and one example is enlarged in fig. 10, *c*, where the warp ends are first grouped into fives by means of a row of twining and then a shed is made of three and two warp ends alternately, through which there are first two picks of black and then two of red. A single pick of the ordinary weft then takes up the two groups and goes over, under, over the ends in the three groups right across the cloth, and this is followed by two picks of black through a shed similar to the first.

In the *kalambi*, *sirat* and girdles occasional weft stripes occur which may be either worked with a needle or woven by a spool; the needle would be the easier, as no new shed would have to be made.

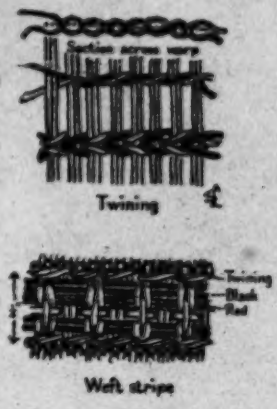

Fig. 10. Weft patterns.

Weft-patterned cloths

The Iban occasionally make use of a Malay loom or *tenjak*, and by means of a series of heddles and treadles set up in a suitable framework produce weft-patterned cloths, but these are rare and are not represented in our collection. When this type of loom is used the pattern itself loses its naïve quality and becomes a regular all-over design based on geometrical forms.

The patterns generally produced by this method are much more akin to Malay and Chinese designs than any produced by the warp-dyed method.

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Iban methods of spinning and weaving fabrics, the apparatus employed and some finished cloths are given by the following: Ling Roth, 1896, 1, pp. 29–54, with numerous illustrations; 1918, pp. 65–70, with illustrations. Other Indonesian looms are described.

J. A. Loeber, Jn., 1903, pl. III, 4, *tangga ubong*, Sarawak (British Museum, no. 1896.3.17), pl. IV, weaving, Saribas Dayak (copied from Beccari, 1904, fig. 13), pl. XIII, 1, "Geïkatte scheriftg", pl. XIV, an Iban *pua*, pl. XIV, 1, an Iban *pua* (British Museum, 96.7); other Indonesian methods and fabrics

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The brocade method

This name has been used because the effect produced is like that of brocade or patterned damask weaving, the pattern being the result of an unbroken surface of weft threads filling the desired shape and passing behind the web between the patterns or else carrying on between them as tabby weaving.

Gold and silver threads are usually used as weft by the Iban when they adopt this method of working a badge at the back of a coat, and the weaving is done whilst the warp is stretched in the loom.

A small spool is used to pick up those warps where the gold is not required to show and passes over the top of any number where pattern is wanted on the surface. Gold thread will not stand much handling because of the possibility of stripping the thin metal from its core of silk or cotton, and as each row is picked up individually there is no great strain on the weft, but the resulting cloth is of a very loose texture.

The simple pattern of lines and lozenges illustrated (fig. 24) in the section on *kalambi* has been carried out in this way. There does not seem any evidence that special weaving contrivances, such as pattern laze rods, have been used for these brocade patterns, and the process, in any case, is much quicker than that of the tapestry method.

Weft manipulation to form pattern

One of the most effective and commonest variations produced by means of the spool is that of "twining", which frequently occurs at or near the beginning of a blanket cloth and is also used as decorative lines in the badges (figs. 10, *a*, *b*, 15).

Two spools are used at the same time and the warps are usually bunched. In fig. 10, *a*, where a white and a black thread are shown, it is quite easy to follow the working. Beginning with the white spool, it goes over, whilst the black goes under the same bunch of warps, and before proceeding to the next bunch the spool threads are crossed, then the black goes over and the white under the next bunch of warps before the spool threads are crossed again. In this way a line of alternate black and white stitches having a rope-like or twisted effect is produced, and if two such lines are worked in opposite directions the effect is that of a black and white plait (fig. 10, *b*).

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Thus the black thread at the top right-hand corner of fig. 8 wraps the third bundle of warps four times, then passes under the second and back over the top of it, under the third and over the fourth bundle. It turns back under 4, goes over 3 and under 2, turning back over the top of it to repeat the previous row. In this manner, which is like darning, the black triangle is completed. As each little bit of the pattern is worked separately it forms a kind of weft-mosaic, and as long as the bulk of the work follows an oblique

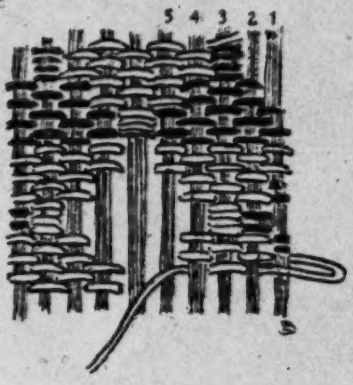

Fig. 8. Tapestry method of needle-weaving or weft-mosaic. Part of the central flower in the badge of 35.903.

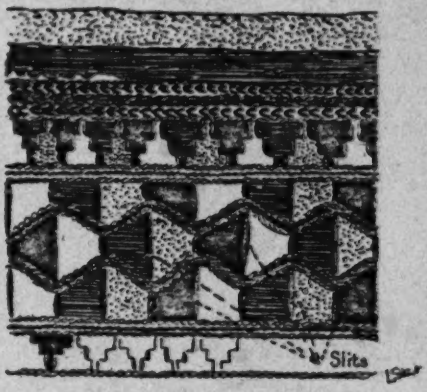

Fig. 9. Needle-woven pattern showing slits. The badge of *kalambi* 35.910.

outline it is firm, but if long vertical lines occur a gap appears in the work, just as it does in actual tapestry weaving, and this has to be sewn up at the back (fig. 9). This method is described variously as the tapestry method, needle-weaving, and weft-mosaic; the diagram (fig. 8) is a part of the central flower in the badge at the back of cloth 35.903. The unfilled lozenge in the centre would be filled in with red in the same way after the black and white triangles around were completed, or the process could be carried out in the reverse order and the central lozenge be worked first.

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has been actually embroidered or worked with free spools it is necessary to follow out a number of individual threads.

This has been done in all cases when the work has been described as embroidered, and it has been found that although working threads generally end at the lowest point other threads have been worked downwards in a vertical and oblique direction first and then upwards again in an oblique line, a method only possible if a needle has been used. One motive from cloth 35.906 (fig. 19) has been enlarged to show the actual stitches (fig. 7).

The ends of all threads are cut off very closely to the cloth and may be either on the right or wrong side, and as the work is extraordinarily well stitched it is sometimes extremely difficult to find where any pattern begins and ends. Both back and front of the work appear alike, although the slanting stitches which carry the thread below the next row of weft usually appear on the wrong side. This form of good workmanship, namely the reversible quality of the pattern, is characteristic of the finer work amongst more civilized Eastern peoples, such as the Chinese and Japanese.

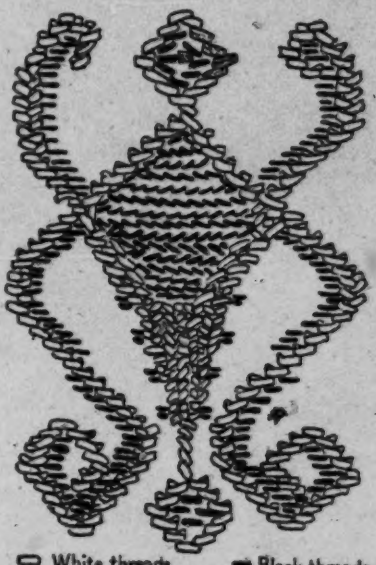

Fig. 7. Bird motive, *burung kaki panjai*, "bird with long legs", on an embroidered coat, showing the direction of the stitches, 35.906. See also bottom row of fig. 23, B.

The tapestry method or weft-mosaic.

This method of forming patterns on a bare warp with a needle is of widespread occurrence; it is found in old Peruvian work and was used in Egypt at least 1500 years B.C. (L. E. Start, 1914, pp. 14, 15). The needle carrying any particular colour darns that thread backwards and forwards over any special series of warps until the little design is completed.

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THE MAKING OF PATTERNS OTHER THAN WARP-DYED

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In addition to the warp-dyed method patterns are produced on the finer cloths woven on the *tumpoh* or primitive loom of the Iban by

(1) Pure embroidery.

(2) The use of free spools to give an embroidered effect.

(3) A form of tapestry weaving or weft-mosaic carried out with the needle.

(4) Brocade weaving with free spools or needles.

(5) Slight variations produced by manipulation of the weft.

When the Malay or *tanjak* loom is used with its series of heddles and treadles, more sophisticated and generally geometric patterns are produced, and Ling Roth mentions the use of pattern laze rods for the same purpose. These methods are refinements which are not typically Iban, and it is noticeable that the cloths woven by the Iban on the Malay loom are always inferior in quality to those woven on their own simpler type of loom.

Referring to the different possibilities of producing pattern it may be noted that (1) and (2) are chiefly used on *kalambi* and *sirat*, (3) and (4) are almost entirely confined to the working of badges and (5) occurs occasionally on *kalambi* and *sirat*, but more often as the heading to the *pua*.

Embroidery and the use of free spools

The raised patterns produced by embroidery can also be made by the use of free spools, used to pick up threads when needed and then allowed to hang from the web until required again; the weft passes across the back of the cloth from one motive to another.

This is a method used by the Malays and is much more difficult than embroidery, and as the Iban do not often use the *tenjak* for their weaving but prefer their more simple *tumpoh*, it seems reasonable to suppose that they would choose the easier method in working the raised type of pattern.

J. A. Loeber, Jn. reproduces some examples with patterns of this type and describes them as having "flottante inslag"—floating weft—which might apply to either method, and in order to find out whether an example

of the warp groups and the few picks of weft to the inch combined with the width of the weft threads, which are usually arranged in pairs side by side, the resulting cloth is a rep or poplin, that is, a warp-surfaced material, which has been produced by the use of one heddle and a shed stick.

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Fig. 5. Continuous heddle leashes: *a*, spiral; *b*, alternate. After Ling Roth, 1918, fig. 1 A.

Although Ling Roth has made a drawing (1918, p. 69) to explain how a pattern could be worked by means of laze rods, we do not know if the Iban ever use pattern laze rods. We are definitely of opinion that the pattern is produced by the *sunkit* method, see p. 88.

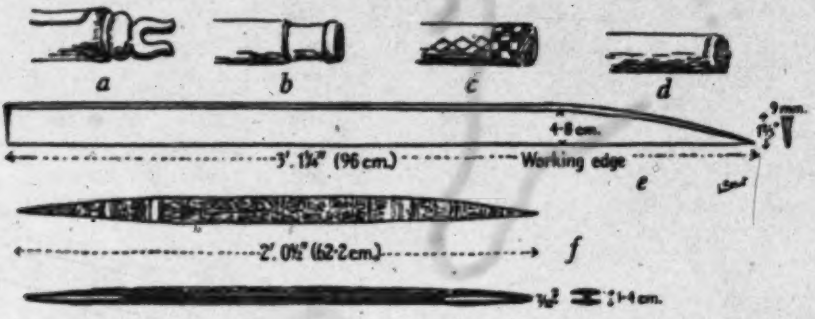

Fig. 6. Iban weaving implements: *a*, *b*, breast beam ends; *c*, *d*, warp beam ends; *e*, sword beater-in; *f*, spool. *a*, *f*, Museum of Ethnology, Cambridge (f. 25.551); *b*, *c*, Royal Scottish Museum, Edinburgh; *d*, *e*, Horniman Museum, London.

Sir James Brooke gave a *pua* to the British Museum (3430) woven with palm fibre; the patterns are those characteristic of ordinary *pua*, but are much less clear.

286 warp threads is fastened by loops or leashes. The latter may be arranged spirally or alternately on the heddle (fig. 5); and more than one end is sometimes threaded through a leash. A sword-shaped beater-in (fig. 6, *e*) is generally used to press home each pick of weft, the latter being carried on a spool, which is often as long as the web is wide, so that it easily passes from hand to hand (fig. 6, *f*).

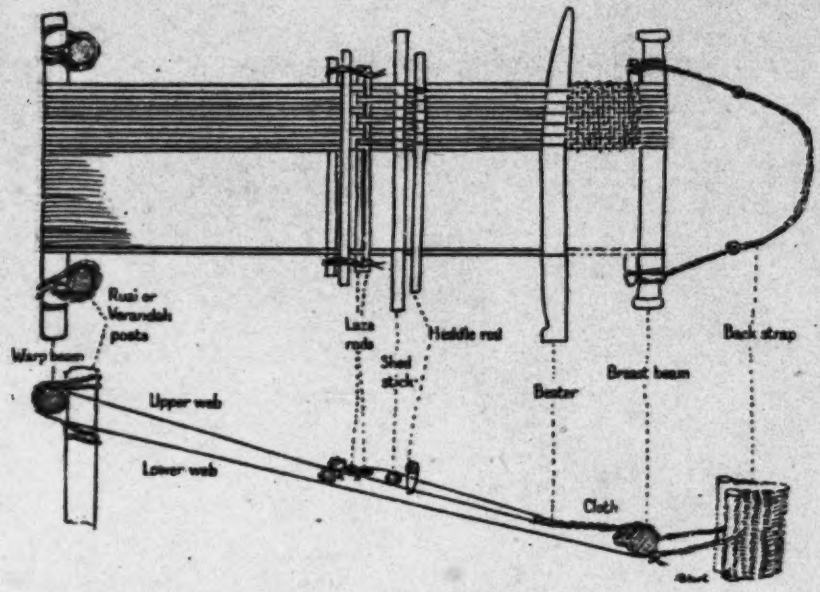

Fig. 4. Plan and elevation of a typical Iban loom, *tumpak*.

Mr Ling Roth (1918, p. 68) indicates that loom pattern laze rods are sometimes used by the Iban, but the examples he describes seem to be for exceptional pieces of cloth which average less than 9 in. wide and vary from 30 in. to 24 in. in length. These are much narrower and shorter webs than any used for the clothing usually worn or than any of the cloths we have examined. In none of these, where the pattern has been produced by the method of warp dyeing just described, has there been any variation from a plain one up and one down like a "tabby weave", but, owing to the slackness

white colour of the future pattern. After this is done the *kebat* thread is taken out of the *tangga ubong* and dipped into *engkerbai* water for a night and then dried; this is a mixture made by boiling the leaves of the *engkerbai* shrub and mixing some *chunam* [lime] with it; this gives a reddish colour to the thread. After it is quite dry the thread is fixed again to the *tangga ubong* and *kebat* for the second time. This second *kebat* is to retain the reddish colour for the pattern, and is called *mampul*. The thread is again removed and dipped into *tarum*, indigo water, which is made from the indigo plant in the same way as the *engkerbai* water; this gives the exposed portions of the thread a black colour. After it is quite dry it is fixed for the last time to the *tangga ubong* to undergo *ngetas tampok lemba*, "the cutting off of the knots", that is, the cutting of the knots of *lemba*. This accomplished, the thread is carefully put into the loom for weaving.

The use of tie-dyeing by other peoples is mentioned on pp. 138–142.

WEAVING

The *tumpoh* or loom used for weaving is extremely simple, being the most primitive form in Indonesia (Ling Roth, 1918, p. 65). Its component parts are a warp beam, breast beam, heddle, shed stick, beater-in, a back strap, and two or four laze rods (fig. 4). As there is no rigid framework the warp beam can be set up wherever there are two convenient upright posts, usually on the *ruai*, the verandah or long reception room. The breast beam, being attached to a back strap that goes round the weaver's waist, lies almost in her lap and so by a slight movement of her body she can manipulate the tension on the web (fig. 4).

The warp is wrapped continuously round the warp and breast beams and the threads are prevented from becoming entangled by one or two pairs of laze rods, the odd threads or odd groups of threads being first lifted and one rod passed through, and then the evenly numbered threads are lifted and another rod is passed through the new shed. The ends of each pair of laze rods are usually tied together by a cord. Cane heading rods are also frequently used at the commencement of the weaving to keep the warps evenly stretched. There are generally a few rows of weaving between the two rods, if more than one is used. The raising of alternative warps, or groups of warps, is effected by a shed stick and the single heddle, to which one set of

283 386 The following technique is employed for the production of the pattern-dyed cloths which have a rep or poplin weave, that is, the warps form the surface of the cloth.

The patterns are produced by a resist method, the parts of the web to be [824] reserved from any dye being tied with a dried strip of a fibrous leaf known as *lemba*. This fibre is stripped from the underside of a broad-leaved plant with yellow flowers (*Curculigo latifolia*) which grows in great abundance on old cultivated fields near houses.

As the continuous warp is wrapped right round the cross bars there is an upper and a lower web; the threads from both are tied together and so a repeat of the pattern is obtained. A skein of the *lemba* fibre can be seen attached to one of the lower cross bars in pl. XXVI, A.

As will be evident from the elaborate designs shown in the *bidang* and *kalambi* cloths illustrated later, quite a small number of warps may be tied together, six or eight, and the distance tied up may be very short. The work is often highly skilled and the women usually work from memory without the aid of any pattern, although the Rev. A. Horsburgh (1858, p. 43) says "the Balaus women sketch out the design on the extended web", see Gomes (1911, p. 52). A portion of the tied-up warp is shown in pl. XXVI, B.

When all the parts intended to be left undyed are tied up, the looped ends of the warp are also tied tightly, although already held securely by the [314] numerous wrappings. The web is then immersed in the dye bath, which is most probably of a brown colour from *pinang* (*Areca catechu*) or of a richer red brown from the mangrove. After soaking in the dye for the required length of time, which may be a few hours or several days, according to the depth of colour needed, the web is stretched out to dry in a shady place. When dry the fibre is cut and stripped off and the design then appears in the natural colour of the cotton, on a dark-brown background.

Several dyeings sometimes take place so as to produce a number of shades and colours.

The yarns for the self-coloured stripes in the borders are dyed separately, and when all are dry the web is set up in the loom with these specially dyed yarns arranged to form warp stripes.

The following description of the technique of warp tie-dyeing is taken from Howell (1912): The first process of *kebat* [or *ikat*, "tying"] is to retain the

but not the rolling, in Java). No other accounts or illustrations give any indication of the Iban employing this method. We have consulted a cotton spinner of great experience, who says that the continual thrashing of the cotton and the cutting up into *luli* would break and weaken the fibres, which would be detrimental to making a good thread in spinning and would not produce yarn of the quality used in the Iban cloths. 283 114

"When the shuttle-pin [this is an impossible term. The Iban use a spool and not a shuttle in weaving. Howell is referring to the spindle] (*mata gasing* or 'eye of the spinning-wheel') is full up the thread is stretched in the *koali* or cotton-stretcher. It is then taken out and dipped in rice gruel (*kanji*) for some little time—this is called the process of *nyikat*; after being well saturated it is taken out and stretched lengthways in the *ruai* [the verandah or long reception room of the house] by means of two bamboos. After this it is combed with a cocoanut husk in order to smooth it and to take off any rice grains that are sticking to it; it remains thus until quite dry, when it is rolled up into a ball or balls; this last process being called *nabu*. The thread is now ready for the further processes of dyeing and weaving" (Howell, p. 62).

According to Howell (but no one else records it), the thread is unrolled from the ball and "stretched in the loom to ascertain the length and breadth of the cloth to be woven; this process is called *mungga*. This being ascertained the thread is carefully taken out of the loom as it is, and fixed to the *tangga' ubong* or 'the ladder of the thread'".

The tying frame, according to Hose and McDougall (1, p. 221), is usually about 6 ft. [183 cm.] long and 20 in. [5·08 cm.] wide. That in the British Museum (96.3.17) is 5 ft. 7 in. long and 9½ in. wide; it is figured by Loebèr, 1903, pl. III, fig. 4. Our specimen (pl. XXVI, A) has a total length of 8 ft. and is 1 ft. 4 in. wide; the cross bars for the longer warp threads are 4 ft. 7 in. apart, the others are 7 in. shorter. Cross bars are fixed to the frame the distance apart required for the length of the cloth to be woven and the yarn goes round them from end to end. 283

If the cloth is to be plain, the web is set up in the loom, but if a self-coloured cloth is required, such as the dark blue worn by widows, the yarn is dyed before it is set up in the loom; there are, however, cases where a patterned cloth has been re-dipped in a blue dye. 283 386

283 action. Gomes (1911), pl. p. 128, gives the same photograph in the correct position). The wheel, which has a shaft passing through two uprights at one end of the stand, consists of two elements, each composed of three flat wooden spokes which cross at their centres and are so arranged that one set alternates with the other (fig. 3). A strong thread is carried across alternately from the ends of the spokes of one element to those on the other, forming a zigzag which is the periphery of the driving wheel. At the other end of the stand there is a support on which the spindle is mounted horizontally; in the one here illustrated it passes through two rings attached to the support and so can rotate freely. The two rings are placed on either side of a long vertical hole near the base of the support through which the endless belt of cord, which goes round the driving wheel, passes to the spindle. The rotation of the spindle supplies the necessary twist to the drawn-out fibre. The process is intermittent, since each length or stretch of yarn has to be wound on to the spindle before another length is spun. When the spindle is full the thread is wound off into a ball or on to a separate piece of wood (pl. xxiv, *a*, *b*).

283 114 A more elaborate method, similar to that used in Java, is described by Howell, who says that after ginning, the cotton is threshed out on a mat with a cotton-beater (*pemalu taya*), the women using both hands for the work; this is done only very early in the morning. The cotton is threshed to form a flat mass, *lapis*, averaging 2 to 3 ft. square and some 2 in. in thickness. In the evening the *lapis* is folded and placed on the thigh to be cut into very thin pieces, which are put into a basket. The following morning the pieces are put on a mat and are again threshed till the *lapis* are reduced to the thickness of a sheet of thick paper. Later the *lapis* is to be *diluli*, that is, to be rolled up into the thickness of a finger so as to be ready for spinning. A *luli* is a pointed stick from 6 in. to 1 ft. long and no thicker than a little finger. After the *lapis* is rolled round the *luli* twice or thrice, it is cut off and placed in a basket. The cotton thus rolled is also called *luli*. The *luli* are then attached to a spinning wheel (*gasing*) and spun into a thread one by one.

We hesitate to criticize any statement by the Rev. W. Howell, but he seems to be describing the Javanese method of preparing and spinning the cotton (cf. Loebèr, 1903, pl. II, 3, 4, which show the thrashing and the *luli*,

out of its skin and dried, it is passed through a cotton gin (*pemigi*) in order to get rid of its seeds" and fragments of husk. 248

The gin consists of two small wooden rollers which revolve in opposite directions, each with a crank-like handle, fixed into the two upright supports of a frame (fig. 2). Extra strips of wood are generally fixed above and below 407

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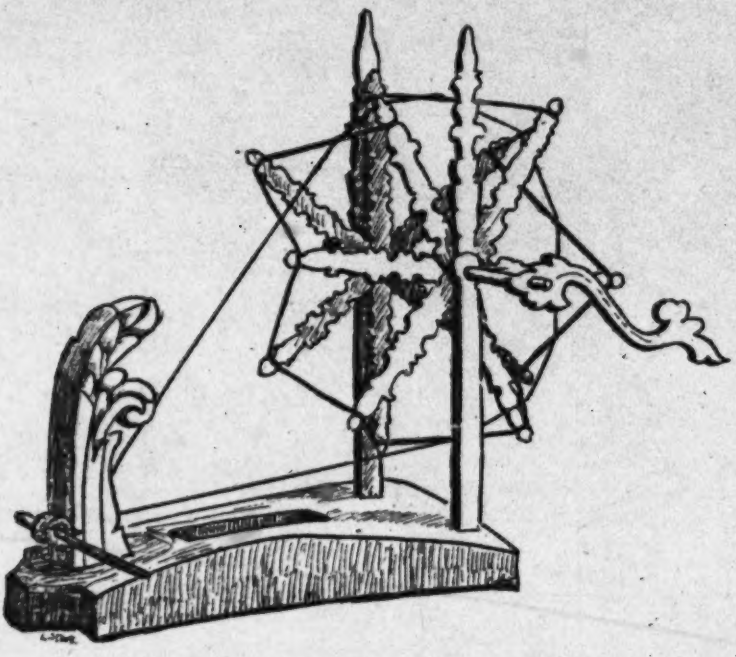

Fig. 3. An Iban spinning wheel, *gasing*. Museum of Ethnology, Cambridge, Haddon collection, Z. 2355.

the rollers to ensure sufficient pressure, and these are tightened by wedges. A similar form of gin is used throughout Indonesia and the Malay peninsula. The yarn is then spun from the mass of fibre.

The simple spinning wheel, *gasing*, is turned by the right hand, the fibre being twisted with the left hand (so Hose and McDougall say, 1, p. 221, but their pl. 119, owing to the method of reproduction, shows the reverse 283

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Fig. 2. Types of cotton gin, *pemigi*, used by the Iban: *a*, *Kilangan kabu-kabu* (Malay), Skeat collection, 336; *b*, Haddon collection, Z. 2352.

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x531

No. of cloth	Length	Width	An analysis of thirty *bidang*				Colour and special notes
			No. of warp ends to inch	Description of warp spacing	No. of weft picks to inch	Description of weft	
35.852	3 ft. 10⅝ in. (118·5 cm.)	1 ft. 9⅝ in. (55·5 cm.)	92 (46 groups)	Ends are paired; warp undyed in pattern stripes	20	Three parallel threads; colour brown	Effective, simple. White patterns on brown background. Pin stripes of black and yellow in borders
35.853	3 ft. 7⅝ in. (110 cm.)	1 ft. 7 1/16 in. (48 cm.)	72	Single; arranged white and brown alternately to produce stripes; thus 2 w., 3 b., 2 w., 3 b., 6 w., 10 b.	24	Two parallel threads. In part of cloth white—in remainder brown	A simple striped cloth—white and brown
35.854	3 ft. 8⅝ in. (115·5 cm.)	1 ft. 11⅝ in. (60·4 cm.)	104 ends (52 groups)	In main pattern paired	26	Four parallel Brown	Three dyeings required for patterns which have pale-brown outlines—red-brown for the inside of patterns and indigo over red-brown for the background and some spots
			128 ends (64 groups)	Paired in borders			The edge has been re-dipped in indigo
35.855	3 ft. 7 in. (109·8 cm.)	1 ft. 4⅝ in. (40·5 cm.)	120 ends (60 groups)	Paired in pattern stripe	24	Single Brown	One dyeing of red-brown on a buff warp
			112 ends	Single, in self-colour stripes			
35.856	3 ft. 10 in. (117 cm.)	1 ft. 5⅝ in. (45 cm.)	56 ends	Single, in plain central band	20	Single Brown	Plain central band of greyish black, indigo over red-brown
			160 ends (80 groups)	Paired in border self-colour stripes	20		Narrow patterned side borders of white on red-brown, divided by brown stripes with pin stripes of red, yellow and dark blue
35.857	3 ft. 6 in. (106·7 cm.)	1 ft. 6⅝ in. (47 cm.)	152 ends (76 groups)	Paired throughout, slightly closer in centre of cloth	42	Single. Brown	A finely woven cloth. Patterns, white and brown. Scarlet, black, and yellow self borders
35.858	3 ft. 10 in. (116·9 cm.)	1 ft. 4⅝ in. (41·9 cm.)	144 ends (72 groups)	Paired except in narrow central stripe, where in threes	28	Two parallel. Brown	Unusual, but ineffective arrangement of narrow striped patterns, divided by pin stripes in colour. There is a narrow, bright red stripe down the centre of the cloth

[p.58]

35.859	4 ft. (122 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups) 152 ends (76 groups)	Paired in pattern stripe In self-colour border stripes	16–20	Four parallel threads in each pick. Brown	White pattern on brown ground. Second dyeing of indigo in splashes on background. Interesting border stripes in black and white, red, black, yellow
35.860	3 ft. 10 in. (116·9 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups) 136 ends (68 groups)	Paired throughout In self-colour stripes	22	Two parallel in part, four parallel in remainder. Brown	White pattern on brown ground. Dark blue, yellow, scarlet and white self border stripes
35.861	3 ft. 10 in. (116·9 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups)	Paired throughout, a good deal of brown background used in border stripes	20–26	Two parallel. Brown	A loosely woven fabric. White pattern on brown ground. Pale blue stripes at edges and in borders
35.862	4 ft. 1½ in. (125·1 cm.)	1 ft. 8½ in. (52·1 cm.)	104 ends (52 groups) 128 ends (64 groups)	Paired in broad pattern stripe Paired in black and yellow, threes in scarlet self stripes	26	Two parallel threads in each pick. Brown	White pattern on brown ground. Scarlet, yellow, and black in self-colour border stripes
35.863	4 ft. 1 in. (124·5 cm.)	1 ft. 8½ in. (52·1 cm.)	136 ends (68 groups) 216 ends (72 groups)	Paired in the pattern stripes. Threes in the coloured self stripes	22	Three parallel threads. Brown	White pattern on brown ground. White, black, scarlet, and yellow border stripes
35.865	4 ft. 0½ in. (123·2 cm.)	1 ft. 5½ in. (43·8 cm.)	144 ends (72 groups)	Paired throughout	24	Two parallel	Evenly woven, brilliant colour. Red and brown background, buff pattern. Interesting border stripes
35.866	3 ft. 10 in. (116·9 cm.)	1 ft. 10½ in. (57·1 cm.)	136 ends (68 groups) 144 ends (72 groups)	Paired in central band of pattern Paired in self-colour border stripes	24	Two parallel. Black, may have been brown before second dyeing	A very finely woven cloth. The colour is unusual, the cloth having been dipped in indigo after it had gone through the usual dyeing processes. The result is that the patterns appear as pale blue on a black ground, and in the border stripes red becomes maroon, yellow green, and brown black
35.867	3 ft. 10½ in. (118·1 cm.)	1 ft. 11 in. (58·4 cm.)	88 ends (44 groups)	Paired throughout	16–18	Fourfold and parallel. Brown	Pattern white on a vandyke brown ground. A very coarse cloth
35.868	3 ft. 10 in. (116·9 cm.)	1 ft. 6 in. (45·7 cm.)	112–120 (56–60 groups) 228 ends (76 groups)	Paired but not quite evenly spaced in pattern band Threes in red self stripe	16	Three parallel threads. Light brown	Buff pattern on brown ground. Scarlet, black, and yellow border stripes with a navy blue stripe at the outer edge

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[p.59]

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No. of cloth	Length	Width	An analysis of thirty *bidang*				Colour and special notes
			No. of warp ends to inch	Description of warp spacing	No. of weft picks to inch	Description of weft	
35.869	3 ft. 8⅝ in. (113·7 cm.)	1 ft. 8⅝ in. (51·7 cm.)	168 ends (56 groups) 192 ends (48 groups)	Threes in pattern stripe Fours in self-colour stripes	18	Fourfold and parallel. Dark brown	Strong colour effect as most of the red-brown background has been over-dyed blue, thus giving vandyke brown effect. Red, yellow, blue, and white self-colour border stripes
35.870	3 ft. 8 in. (111·8 cm.)	1 ft. 9 in. (53·4 cm.)	88 ends (44 groups) 108 ends (36 groups)	Paired in pattern bands Threes in self-colour stripes	24	Three parallel threads. Brown	Background red-brown and black, owing partly to over-dyeing with indigo, the pattern on it in buff and white. Red, yellow, and black self border stripes
35.871	3 ft. 10 in. (116·9 cm.)	1 ft. 7 in. (48·2 cm.)	112 ends (56 groups) 144 ends (72 groups)	Paired throughout in pattern band In self-colour stripes	23	Three parallel threads. Brown	An evenly woven cloth, of crisp firm texture
35.872	3 ft. 8 in. (111·8 cm.)	1 ft. 7½ in. (49·5 cm.)	128 ends (64 groups)	Paired throughout	20	Single. Brown	Very clear pattern in buff on a reddish brown ground with occasional vandyke spots, also touches of blue in borders. The fineness of the weft produces a fine, soft cloth
35.873	3 ft. 8 in. (111·8 cm.)	1 ft. 9 in. (53·4 cm.)	92 ends (46 groups) 176 ends (88 groups)	Paired in pattern portion and in self-colour stripes	26	Two parallel threads. Brown	Buff pattern on red-brown background
35.874	3 ft. 11 in. (119·4 cm.)	1 ft. 11 in. (58·4 cm.)	80 ends (40 groups)	Paired throughout	16	Four parallel threads. Dark brown	Extra large, coarse cloth. Buff pattern on brown ground. Border stripes and dividing lines in white, yellow, black, and brown
35.875	4 ft. 0½ in. (123·2 cm.)	1 ft. 8⅝ in. (51·8 cm.)	96 ends (48 groups)	Paired throughout	20	Single. Brown	Large cloth. Buff on reddish brown ground. Generally of dull appearance. Border stripes black and yellow only

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35.877	3 ft. 9½ in. (114·7 cm.)	1 ft. 7½ in. (49·3 cm.)	168 ends (56 groups)	Threes practically throughout, one or two fours	10–12	Three parallel. Brown	Very gay in colour in border stripes. Red background to central band, overdyed indigo, the pattern in buff with some parts in red. Red, yellow, blue, and black and white borders
35.878	3 ft. 8 in. (111·8 cm.)	1 ft. 7½ in. (50·1 cm.)	96 ends (48 groups) 108 ends (36 groups) 192 ends on an average	Curious irregularity in grouping of threads paired for most of pattern stripes, but in threes for 4 in. at left In self-colour stripes, threes and fours indiscriminately	15–16	Three parallel. Brown	Most brilliantly coloured in whole collection although similar to patterns in white, outlined dark brown, on reddish brown background. Narrow border stripes in yellow, scarlet, white, and navy blue, with a black and white horizontally striped border as well
35.879	3 ft. 6½ in. (106 cm.)	1 ft. 2½ in. (52·1 cm.)	132 ends (44 groups) 144 ends (36 groups)	In threes in patterned stripe In fours in red and blue self stripes	20	Two parallel. Brown	Generally dull in tone. Warps of pattern stripe dipped in weak indigo bath, after having been dyed brown. Broad outer stripes of indigo and small border stripes of red, yellow, and black
35.880	3 ft. 9 in. (114·4 cm.)	2 ft. ½ in. (62·9 cm.)	96 ends (48 groups)	Mostly grouped in twos and threes	16	Two parallel. Brown	Border stripes somewhat unusual in colour, navy blue, scarlet and orange used. The orange, yellow overdyed red. Buff pattern on reddish and black ground
35.883	3 ft. 5 in. (104·2 cm.)	Varies from 1 ft. 5 in. (43·2 cm.) to 1 ft. 5½ in. (39·4 cm.)	120–168 in patterned section 192–280 in finer border stripes	Very uneven spacing. In pattern stripes mostly paired with occasional single warps. Similarly in border stripes	24 of ordinary cloth weft, and in pattern 24 of coloured weft	Two parallel white, right across cloth between each pattern pick; eight parallel strands of red or four of black for pattern picks	Red and black embroidered pattern threads turned back at border stripes. Border stripes of red, yellow, and black enclose three narrow white stripes with embroidery, in black and red on them
35.894	3 ft. 9 in. (114·4 cm.)	1 ft. 7½ in. (50·1 cm.)	112 ends (56 groups) 144 ends (72 groups)	Paired throughout but closer spacing in dark brown self stripes	20	Three threads parallel	White pattern on brown ground. Dark brown border stripes near outer edge and series of brown and yellow self-colour pin-stripes with two narrow patterned border stripes between
35.882	4 ft. 3 in. (129·6 cm.)	1 ft. 9½ in. (53·9 cm.)	108 ends (36 groups)	Grouped in threes throughout	20	Fourfold. Blue	Coarse cloth of firm texture. White pattern on blue background. Border stripes in red, yellow, and white. General colour scheme pleasant

[pp. 62–122 were not processed]

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AN ANALYSIS OF THE PATTERNS

X 531 [428 424]

The particular fascination of a study of the woven textiles of the Iban lies in their patterns. These are traditional and hereditary, being handed down from mother to daughter, and we have already stated (p. 44) that the *engkaramba* figures may be made only by women belonging to ancient and honourable families.

The motives employed on the cloths include human and fabulous forms, zoomorphs (mammals, birds, reptiles, insects, etc.), phyllomorphs (trunks, branches, tendrils, leaves, flowers, fruit, etc.), material culture (hooks, spools, boats, paddles, ladders, fences, etc.) and finally natural phenomena (clouds, rivers, and the moon), but examples of this group are rare.

Some of the designs are fairly realistic, but most of them are highly conventionalized, so much so that it would be impossible to recognize what they were intended to represent were local information not forthcoming. We have referred in the Introduction to the difficulties we have experienced in the identification of some of the designs.

Hose and McDougall (1, pp. 242–244) state that: "In wealth of decorative designs the Ibans surpass all the other tribes. These designs are displayed most abundantly in the decoration of bamboo surfaces and in the dyeing of cloths. The designs on bamboo surfaces are largely foliate scrolls, especially the yam-leaf, but also occasionally animal derivatives.

"The designs dyed upon the cloths (fig. 61) are largely animal derivatives; but the artists themselves seldom are aware of the derivation, even when the pattern bears the name of its animal origin; and as to the names of all, except the most obvious animal derivatives, even experts will differ. The frog, the young bird, the human form, and the lizard are the originals most frequently claimed. Parts of the animal, such as the head or eye, are commonly repeated in serial fashion detached from the rest of its form. And in many cases it is, of course, impossible to identify the parts of the pattern, although it may show a general affinity with unmistakable animal patterns. One such pattern very commonly used in dyeing is named after *Agi bulan*, the large shrew (*Gymnura*); but we have not been able to trace the slightest resemblance to the animal in any of the various examples we have seen (pls. 131, 132)."

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ANTHROPOMORPHS

X 531 Two plates, I and II, are devoted to the representation of human figures, *engkaramba*, and another set is drawn in connection with the *manang bali* jacket referred to on pp. 37–46. The *S.D.D.* defines an *engkaramba* as [189] "a representation of anything cut out of wood"; labels on cloth 35.926 state, "figure used to keep off harm", "*engkaramba* are used to prevent harm coming to crops, etc." We have failed to find any reference to *engkaramba* in the literature dealing with the Iban (see Vocabulary).

[554] These designs occur chiefly on blankets, *pua*, and jackets, *kalambi*, and may be made only by the wives and daughters of chiefs, and even they must begin by making other patterns. They have a protective and beneficent influence, except in the case of headless corpses, *bukang* (pls. I, *d*, *g*; II, *h*), [184] which may only be made in the *pua* by old women, as sickness is feared if this pattern is produced; it is *mali* (tabooed, forbidden) for young people to make it.

In a fairly large number of examples the legs are turned up, probably because in this way the figure fits better into the horizontal band of pattern of which it is a motive (pl. I, *b*, *e*, *f*, *h*). A "female figure" *engkaramba besugu* is depicted on a shawl (p. 106; pl. I, *i*) but the design is the same as that for a man, except for the "comb" in the hair. "Feathers" are shown in the hair of men in fig. 22, *c*, *d*. The only other representations of women are found in a jacket (pp. 41, 44 and figs. 19, 20, 21) where they alternate with men.

In addition to the typical *engkaramba*, *Aki Ungkok*, grandfather Ungkok who lives in the moon and whose face is seen there, is figured in pl. I, *a*. One label refers to his *bungkok*, "bent back" (it also signifies "hunchbacked") and another label to *tiang penyandih*, "the post against which he leans when tired". This design is quite unlike the other anthropomorphic figures, but has great similarity to the deer patterns. An unusual figure (pl. I, *j*) (could it be a stooping figure making obeisance to the moon?) occurs as an all-over pattern on the *pua* called a moon cloth (pp. 120–122). A similar *pua* is seen in Camb. Mus. photo. Indon. Born. no. 374.

On pl. II all the figures from *a* to *g* are merely entitled human figures, *engkaramba*; that at *j* is named a "diving pattern" and is the only anthropomorph (if it be one) on a *bidang*. The attitude of this figure is quite realistic.

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One other very interesting little detail occurs on cloth 35.924 and is figured on pl. II, *i*; this is called *gari enk* [*engku*], my clothes; perhaps it is a private mark or a mark of possession. 531X

Further details of the meaning of some anthropomorphs are given at length in the note on the *manang bali* jacket, pp. 40–46.

ZOOMORPHS

VERTEBRATES

Deer

Three kinds of animals are usually termed "deer" by most authors on Bornean ethnography. These are *rusa*, a true deer (*Cervus equinus*)—this is a variety of the sambar which is widely distributed in the East—*kijang*, the barking deer (*Cervulus muntjac*) and *plandok*, the diminutive mouse-deer (*Tragulus*, two sp.), which is not really a deer; this inhabits the jungle, whereas the two former are generally found in clearings. 531X 136

The patterns in the deer cloths are particularly interesting but difficult to follow. When, however, they are carefully traced out, representations of the stag have "branching" or "crossed antlers", the doe is hornless and the udder is represented; on one cloth where both sexes occur another pattern, a "young deer", *anak rusa*, is also shown (pl. III, *h*). All the deer patterns have a line of darker spots down the centre of the form, but the deer have a uniform brown colour without any markings; this type of decoration is used in some other patterns. 531X

The muntjac is very important as an omen to all Bornean peoples, but least so to the Iban. The bark of the deer prevents people from continuing their journey, and even divorces people who are newly married. The little chevrotains, *plandok*, have the same function so far as a journey is concerned, but otherwise they are not very important. Sir Spencer St John says (I, p. 64): "To hear the cry of a deer is at all times unlucky"; we cannot find any specific mention of the *rusa* as being an omen animal apart from the general statement that the noises made by all "deer" are bad omens. If, as we suppose, the patterns on the cloths act largely as talismans or as amulets, it seems rather strange that the *kijang* and *plandok* are entirely unrepresented 531X 787 825 [777]

531 787 825 [224] so far as we are aware, whereas the *rusa*, which apparently is the least important in this respect, is frequently represented. It may be that the decorative branching antlers, which this species alone possesses, appeal strongly to these artistic women. Deer are regularly hunted with dogs for food, and perhaps success in the chase may be the underlying idea of these representations on the cloths.

Tigers

X 531 136 Highly conventionalized tiger, ***remaung***, patterns are frequent on cloths (pl. IV), and in basketry the foot of a ***remaung*** is sometimes represented. As the true tiger, ***remaung bendar***, does not inhabit Borneo, it can be known to the Iban only by repute. Of the six species of *Felis* in Sarawak, by far the most important is the clouded tiger-cat or clouded tree-leopard, ***engkuli***, *Felis nebulosa*, and it is the ***remaung*** most frequently depicted. *F. planiceps*, ***jelu mayau***, is often very destructive in the gardens, as it is very fond of fruit, and digs up and eats sweet potatoes. *F. bengalensis*, ***mayau kuching bata***, is about the size of a domestic cat and steals fowls; it lives in rocks (***batu***). *F. marmorata*, ***remaung rarus***, the marbled cat, is larger than a domestic cat and is very fierce. The other two species are very rare.

X 531 The supernumerary legs and paws which appear in many designs, as in pl. IV, may be suggestive of the agility and ferocity of these animals. The large size of the paws is especially noticeable in most of the designs.

It might be supposed that the patterns were intended to confer strength, agility and fierceness on the wearers, but as the designs are almost confined to the ***bidang*** of the woman the idea of protection seems here to be indicated, not only of the woman herself but of her crops and fowls.

Interesting designs are the sleeping cats, ***mayau tindok***, represented on pl. XVII, *r–u*.

Shrews

X 531 136 The *Gymnura raffiesi*, ***aji***, ***aji bulan*** (***tikus bulan***, "moon rat"; ***tikus antu***, "spirit rat", Malay) is the survivor of a Tertiary group of Insectivora. It is not unlike a large rough-haired shrew and it has some affinities with hedgehogs; for convenience it may be termed a shrew. It is mainly white in colour. It is purely nocturnal and lives in the jungle close to water under the

roots of trees or in holes it has excavated. Its favourite food seems to be cockroaches, termites and various larvae, but it eats all kinds of insects and some vegetable matter, such as leaves and small berries. It has a peculiar offensive odour. When caught alive it is extremely savage and bites at anything within reach, snarling and growling.

Aji is one of the subsidiary omen animals, and is supposed to be a manifestation of Klieng, the war god and greatest hero of Iban legends. In the *S.D.D.* *aji* is also stated to be "a title of the Dayak fairy god Kling", and he is referred to as "The god Kling Aji who is brave". Ling Roth (1, p. 332) gives a tale from Brooke Low's notes in which Aji is the brother-in-law of Klieng and there is nothing to associate him with the moon rat. Klieng is a hero, not a god. Endless stories are told of this mythical being, most of them warlike and spectacular, and so representations of the shrew might be expected to confer bravery on the wearer of the garment, if it were not almost confined to *bidang*; perhaps the *aji* patterns refer in some way to the hero.

The well-known pugnacity of the animal is suggested in the fighting attitude of two shrews facing one another (pl. v, *g*), a favourite motive on shrew-patterned cloths.

Examples of characteristic shrew patterns are illustrated on pl. v, *a–e*; *f* is a shrew which occurs on a tiger cloth and is an example of the influence of one pattern upon another, as characteristic *remaung* paws are indicated in addition to shrew legs; the distinctive snout is clearly shown. Judging from the cloths the shrew appears to like the sweet-smelling *bangkit* fruit, for several designs show the *aji* on one (pl. vi, *a*, *d*, *e*). One shrew (pls. xxix; vi, *c*) has white spots, which may be rice grains, in its stomach and another (pls. xxx, a; vi, *b*) is actually depicted inside a *plangka*, "husking box", but there is a very different kind of *plangka*, see p. 78. There is no record of the shrew feeding on rice grains, and it seems very improbable that a jungle animal would enter the houses even if it could climb up the ladder.

Burong, *or bird, patterns*

The reason for the preponderance of bird patterns is evident, for mostly good omen birds are portrayed which will ensure success in whatever venture is being undertaken, although other birds are also represented. In

X 531 the illustration on pls. VII, VIII, IX, no special types of birds can be distinguished, except pl. IX, *a*, which is a variety of swift or swallow and is always represented by a large wing, and *e*, which has distinctive tail feathers of the argus pheasant. Bird patterns are most often used in the narrow borders at the sides of the cloths and therefore have to fit into rather narrow parallel lines. Birds whose wings are covering their bodies are represented at pl. VII, *i*, *j*, *k*, and birds with "combs" at pl. VII, *l*, *m*, *n*, *o*, *p*; these seem to refer to the comb-like effect of the feathers on the wings rather than to a comb on a bird's head; *q* and *r* of pl. VII represent a bird with limbs outstretched.

Birds in action are figured on pl. VIII, where some are shown eating the sweet *bangkit* fruit, in *a* and *b* part of the fruit is seen with the bird almost hidden by it; others are depicted on a netting needle or spool of which a clear shape is seen at *e* and degenerate forms at *f* and *g*. Three birds are described as "rowing" or swimming, *h*, *i*, *j*. Those at *k* and *l*, which are dancing, are particularly interesting, as in one of the three ancient Dyak dances in which the chiefs leap up and down with extended arms in imitation of the flight of a soaring hawk. It will be noticed that these two figures are quite distinct from all the other bird designs.

Special types of birds are illustrated on pl. IX, but as their designations are obscure we are not able to discuss them; one (*h*) seems to be an omen for rain. We have a note that *burong belingkian* (pl. IX, *e*) is the argus pheasant, *Argusianus grayi*, which has two distinctively long tail feathers, but *ruai* is the common Iban name for the bird. The ocelli of the long wing feathers are perhaps represented on pl. XVII, *e*, and possibly on pl. XVII, *d*. [136]

At the foot of plate IX are four young birds, *j–m*, and a fifth, *n*, has wings typical of swifts in other designs. A bird with long legs is shown in fig. 7 and in the bottom row of fig. 23, B.

The elaborate figures on pl. X are named after *Singalang Burong* himself, whose earthly form is *lang*, the kite, *Haliastur intermedius*, a sub-species of *H. indus*, the Brahminy kite of India. The striped feathers of the kite, *e*, *f*, are occasionally represented as independent designs and doubtless have the same significance as the whole bird. The obscure design labelled "*kengkang lang*", referred to on pp. 33, 35, 36, 37, 73, 84, 113, 118 and illustrated in fig. 18, *b* and in pl. XXVIII, B, is of peculiar interest. X 531 136

Favourite designs, especially on *sirat*, are *mata puna*, "the eyes of the

small green pigeon" ("*Treron*, all species except *T. capellei*", *S.D.D.*); perhaps it is represented for the purpose of protecting the crops from the pigeons (pl. xvii, *k*, *l*, *m*). 531X 136

Crocodiles

Although the crocodile, *baya*, is frequently used as a decorative motive in war-boats and is carved on the posts of the long house, it seems only to appear on the textiles used as blankets.

The crocodile designs, as will be seen from those figured on pl. xi, are amongst the most life-like representations on the cloths. The blankets upon which they appear and other designs are used as wall decorations as well as for their more practical purpose. Crocodiles on *pua* are shown in Camb. Mus. photos. Indon. Born. 362, 387, 394.

"A special deity, Pulang Gana, presides over the rice-culture of the Ibans, but the crocodile also is intimately concerned with their rice-culture.... On going to a new district Ibans always make a life-size image of a crocodile in clay on the land chosen for the paddy-farm....When the rites are duly performed this clay crocodile destroys all the pests which eat the rice....: Many Ibans claim the live crocodile as a relative and...will not eat the flesh of crocodiles nor kill them, save in revenge when a crocodile has taken one of their household. They say that the spirit of the crocodile sometimes becomes a man just like an Iban....Another reason given for their fear of killing crocodiles is that Ribai, the river-god, sometimes becomes a crocodile", as may Klieng, who gives them heads in war and first advised the Iban to make friends with Pulang Gana (Hose and McDougall, 1901, pp. 198, 199; 1912, II, pp. 88, 89). The belief that crocodiles are afraid to eat Iban is reported by the Rev. W. Chalmers as quoted by Ling Roth, I, pp. 348–350. 825 776 243 784

Lizards

Borneo abounds in lizards; Beccari mentions 49 species, one of which is the monitor lizard, *bayak*, *Varanus* sp., which reaches a yard in length; it is common and its flesh is highly esteemed. This is conventionally represented on pl. xii, *l*, but what is evidently the same lizard is realistically shown in shell-work on certain *kalambi*, pp. 51, 52. Large "lizards" adorn a *pua* (1905, 419) in the British Museum, which, if they are lizards, are probably 531X 136

X531 136 monitors; and it is possible that the six reptiles on our cloth 35.931 are monitors and not crocodiles.

The much smaller green grass lizards which are represented from *a* to *e* as young ones, *anak lachau*, are depicted as full grown in *f*, *g*, *h*, but except at *h* the legs are not shown. This may possibly be due to the fact that the narrow borders in which they usually appear do not leave much room for them.

Examples of skink lizards, known as *engkarong*, are shown at *i* and *j* on pl. XII, and are interesting because they have distinct heads and tails. The stiff lizard or skink, *engkarong kejong*, figured at *k* occurs only once in the cloths.

Snakes

X531 Snakes, as such, are not shown on our cloths, though several border stripes are said to represent banded snakes, pp. 29, 33, 55, 68, 73, 112. This seems to be more in the nature of a colour effect than an intention to delineate actual snakes. Two *pua* in the Sarawak Museum, nos. 244, 247 (Camb. Mus. photo. Indon. Born. nos. 357, 360) have six large snakes that extend along the whole length of each cloth.

Occasionally, as on a cloth, no. 407 in the British Museum, and on a *sirat* in the Sarawak Museum, no. 262 (Camb. Mus. photo. Indon. Born. no. 407), one finds a folded band termed *leku sawa*, "twining of the python or twisting like a python".

[776] Perham says that the feeling of the Iban towards prominent members of the snake tribe is something more than reverential regard, much the same as is given to *antu*, but it is "a personal and not a tribal deity". The python, [136] *sawa*, and the cobra, *tedong*, are the snakes generally selected by the *antu* for their habitation, but only individual ones.

Frogs

The frog designs naturally fall into two categories: (1) the true frog, [776] *engkatak*, and (2) more or less mythical conceptions of it and those frog-like creatures known as *gajai*; we do not know why that shown in pl. XIII, *k* was labelled "*entilang gajai*".

[136] (1) Of the first group one, a species of frog, known as *pamā*, is sometimes represented anthropomorphically, pl. XIII, *g*, but at *f* it is somewhat more like a frog.

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Frogs are used for food and they are considered a great delicacy; quite life-like representations of them are not uncommon, such as the examples drawn on pl. XIII, *a*, *b*, *c*, *d*. The curious appendages on the fore-limbs of *d* cannot be accounted for.

(2) The other designs are of mythical creatures with more or less frog-like bodies and human heads, whose special significance is unknown to us. That on pl. XIII, *b* is labelled *engkarumba engkatak*. *Engkarumba gajai*, *i*, *gajai*, *j*, and *entilang gajai*, *k*, can scarcely be expected to look like frogs as they are mythical creatures. All these occur on *pua*.

Salampandai is a female spirit and the maker of men. Apparently she is never visible in her own person, but she is supposed to have a manifestation in a creature something like a frog, which is also called Salampandai. This creature is regarded with reverence and must not be killed. If it goes up into an Iban house, they offer it sacrifice and let it go again, but it is very seldom seen. The noise it makes is said to be the sound of the spirit's hammer, as she works at her anvil in the unseen regions hammering out children as they are born into the world. The creature is supposed to be somewhere near the house whenever a child is born; it approaches from behind if the infant is a girl and in front if a boy (see p. 115). The *S.D.D.* says: "*Selampandai*, a species of locust only heard at night. It is the manifestation on earth of Selampandai".

Kalambi gajai is a jacket with a frog pattern (*S.D.D.*) and it appears to us that this *gajai* may be a representation of Salampandai as a frog. If this be so its occurrence on a cloth worn by women would be very appropriate, but we do not know if this is a woman's *kalambi*.

Invertebrates

Spiders

Many species of spiders exist in Borneo, and some are large and have a poisonous bite; it is probably as a protection from such harm that they are portrayed on the cloths.

Spiders, *emplawa*, usually are delineated correctly with eight legs, but exuberance in design and perhaps the speed at which they travel occasionally makes them appear as if they had more. They are sometimes represented with another animal inside them: (pl. XV, *a*), a lizard (pl. XV, *c*), a bird

X531 (pl. xv, *b*) and birds' heads (pl. xv, *d*). This is, of course, impossible, and may be due merely to the artist's urge to fill up a vacant space. Examples of young spiders are drawn on pl. xiv at *a* and *b* (these usually have but four legs), and of other spiders at *c*, *d* and *e* on the same plate.

Centipedes

This group of designs on pl. xvi, *a–f*, is very common on narrow border stripes of *bidang*, and its use is probably protective. The designs are very suggestive of the *embayar* itself, the so-called "hundred legs" making a definite appeal. In one cloth, 35.881, the centipede (pl. xvi, *d*) extends for half of the length of the cloth and finishes with a curly twist at each end. The ardent desire for bi-symmetry which the Iban designer possesses often results in the head and tail of a creature being represented as much alike, but in the centipede there is actually this similarity.

Scorpions, insects, etc.

X531 136 There are other zoomorphs, some of which are not of very frequent occurrence in the cloths, such as those illustrated on pl. xvii. A scorpion, *kala*, is shown by *a*; and a scorpion's nippers, *spit kala*, by *b*. The *buyah*, a beetle or moth, is represented by *c*. *Pantak* is a wasp, the *S.D.D.* gives: "*Pantak*, a small dark-coloured wasp which inhabits holes in trees, or perhaps, more frequently holes in the banks of streams". *Pantak penandok* (pp. 74, 118; pl. xxvii, *d*) may be translated as the wound caused by the sting of a wasp, and *pantak penandok iku ruai* (p. 113; pl. xxvii, *e*) may be such a wound, or possibly the scarification preparatory to the cupping process (*nandok*), which may be likened to the ocelli on the feathers of the argus pheasant (p. 128); but *ruai* also means the verandah of a Dayak house. At one time we thought that the term on p. 113 might have reference to clay nests of solitary wasps sheltering under the verandah of a long house. Here we must leave it pending local information. A stylized wasp is shown in *f* on a flower pattern, *pantak lelambak*. A grub, *empetut*, *g*. Heads of locusts, *pala buntak*, *h*, *i*, are very commonly represented, perhaps for the purpose of protecting the crops. Crabs are eaten; young crabs, *anak ketam*, are shown in *n*, *o*, *p* with only four legs, and at *q*, the nippers, *spit*, of the freshwater crab, *grama*.

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Leeches

All those who have travelled through the jungle in Borneo are unpleasantly acquainted with the land leeches, *lintah*, which stretch out from the foliage and fasten themselves not only on exposed portions of the body but find their way beneath the clothing; periodic examination of the whole person is sometimes necessary in order to remove these blood-suckers. It is rather surprising that these creatures are depicted, so far as we know, on but a few *bidang*. On pl. xvi, *j*, *k*, are seen leeches on a creeper and a flower. Leeches with interlocked mouths are called *betegam*, which means "to swallow all at once"; it is physically impossible for a leech to swallow anything except blood. Their coiled-up (*besimpan*) tails are shown at *l* and *m*; the former is from one of four *bidang* in the Sarawak Museum (nos. 213, 217, 219, 465; Camb. Mus. photos. Indon. Born. 324, 329, 330, 409).

We do not understand the significance of the hooks on the bodies of the leeches. It is tempting to assume that leeches are represented as charms to keep them away from the wearer of the *bidang*.

The *S.D.D.* gives "*Lintah*, the water leech", but the *lintah* on the cloths are certainly land leeches.

PHYLLOMORPHS

The *empili*, mast, drawn on pl. xviii, *a*, *b*, *c*, *d*, *e*, is a wild nut which is the favourite food of wild pigs; it, in conjunction with the arenga palm, *entibap* (pl. xxii, *a*, *b*, *c*, *d*), and ratan leaves is very frequently used as the decoration for the narrow patterned stripes at the sides of the cloths.

The arenga palm, *Arenga saccharifera*, has many uses: the juice from the inflorescence makes sugar and, when fermented, toddy or palm-wine; the black fibres around the trunk and the bases of the fronds make very strong and durable rope, preferred to ratan in house-building; the cotton-like down is used as tinder, *lulup*; and the trunks afford excellent sago.

There are many varieties of the climbing palm (*Calamus* sp.) known as *rotan* by the Skarang and Saribas Iban and as *wi* by other Iban: the thinner kinds are the more valuable. Baskets and mats are made of split ratan and pliable ratans are used as ropes. The thorny tendrils (*tangai*) and leaves of the ratan (*daun wi*) are very frequently represented in the narrow border patterns of *bidang* and occasionally in those of *pua* (pl. xxii, *j*, *k*, *l*, *m*, *n*).

X 531 137 Many other jungle plants and one species of ratan have very large thorns which make the clearing of the jungle very difficult; two crossed thorny stems of ratan, *unak wi bekait*, are illustrated on pl. XXII, *o*.

The *tangkong* "creeper" (? a climbing plant), which is a jungle plant with scented pendant flowers, provides many characteristic patterns. The designs *b*, *c* on pl. XIX and all those on pl. XX are derived from this plant. The *randau* is some kind of creeper or climbing plant.

Illustrations of *bangkit* flowers are given in pls. XIX, *a*; XXI, *e*; the fruit is always represented as lozenge-shaped (pls. VI, *a*, *d*, *e*; XVIII, *i*, *j*, *k*) and is one of the most common motives on woven and embroidered cloths. The *S.D.D.* says, "*Bangkit*, a scented flower, scented leaves or fruit of certain jungle trees used as scent or ornaments to decorate the hair or body".

The fruit of the *beringen* tree is occasionally represented (pl. XVIII, *l*) and much more often that of various species of mango (*Mangifera*): we illustrate *buah bunut*, "horse-mango" (pl. XXII, *r*) and *buah angkong* (pl. XXII, *q*, *s*). "*Angkong*, a tree bearing strong-scented diamond-shaped fruit (the horse manggo)", *S.D.D.*

X 531 136 A tree with its trunk and branches outlined by the light of fireflies dominates the surface of *pua* 35.922 (pl. XXI, *c*), and *pua* 35.928 is very similar. Species of large fireflies are common in Borneo, and when they settle in enormous numbers on a bush or tree it appears as if on fire; the white line round the designs suggests this remarkable phenomenon.

X 531 137 262 Very frequently repeated in all the kinds of cloths are the young shoots of the bamboo *pemuchok tubu*, which are used as a vegetable; we illustrate a few on pl. XVIII, *f*, *g*, *h*.

The curled tops of the *rĕsam* fern, *gelong paku rĕsam*, are occasionally depicted in a realistic manner (pl. XVIII, *m*, *n*, *o*). *Paku* is the general name for ferns, particularly for *Hollenium esculentum*, which is eaten as a vegetable. The *deman* is the fern *Gleichenia dichotoma*.

X 531 137 824 Other useful plants are represented on cloths, the most frequent being the *bingka lia*, "root of the ginger" (*lia* or *liah*), and gourds. Seeds, *leka*, are shown on pl. XIX, *f* of the *labu*, "a white pumpkin, gourd, calabash (*Cucurbita lagenaria*)", *S.D.D.*, the dried fruit of which is used as a water vessel. The *serok genok* is shown on pl. XXII, *f*; the label says, "*genok*, a gourd with a long twisted stalk; the fruit is used by the Dayaks to rub their bodies in the place

of soap". The *S.D.D.* says, "*Genok*, gourd, a white pumpkin (when dried these are used as water vessels)". *Bunga janggat*, flower of the *janggat*, "a white pumpkin, a fruit resembling a vegetable marrow", *S.D.D.*, is embroidered on jacket 35.904 and illustrated on pl. XXII, *g*.

Lelambak is a conventionalized flower very frequently plaited in mats and baskets; it is embroidered on jacket 35.918 (2) (pl. XXII, *i*).

It will be noticed that practically all of the plants represented are of value to the Iban in their daily life, though the thorny plants may form an exception.

OBJECTS IN DAILY USE

A small number of the designs, probably about 3 per cent., represent objects connected with the daily life of the Iban.

A plot of land, *ras*, and the balk or ridge of earth around a plot of land, *ladang*, are illustrated at *e* and *f* on pl. XXIII. A rocky ledge in swamp-land, *padong paya* or *paya bepadong*, *a*, *c*, and sown swamp-land, *tabor paya*, *b*, are shown on pl. XXV, and mentioned on pp. 91, 92, 95; we do not profess to understand the designs. Zigzag fences, *pempang lelingkok*, are sometimes shown (pl. XXIII, *g*).

Connected with houses are: the plank where the prop is tied, *papan penukoh*, and serrated notch in an upright post for a cross bar, *dabong betangkal* (pl. XXIV, *m*, *l*). Boards or planks and poles are represented on other cloths, and the notched steps of a pole-ladder, *tangkal tangga*, or *tebok tangga pantok*, on *bidang* 35.877 (27), 35.862 (21) respectively. The framework of an Iban cooking place, *entilang*, with its shelves and a bird on the middle shelf is depicted on pl. XXIII, *h*, two hearths, *entilang dapur*, *j*, *k*, and fire-tongs, *spit api behilak*, *i*. A tripod for cooking rice, *tanku asi*, is seen on pl. XXIV, *f*, and a "box" for paddy husking, *entilang pelangka*, at *i* and pl. XXX, A; see p. 78 for another kind of *plangka*. Hooks, *kait* (pl. XXIII, *o*, *p*, *q*), are frequent and also wedges, *pasak* (*r*, *s*, *t*, *u*).

Warlike pursuits are represented by the shield, *trabai bungkok* at *a*, the handle of a shield, *gelang trabai*, at *b*, and the sheath of a kris or dagger, *sarang kris*, at *d*. A canoe, *besampan*, with a suggestion of the stern platform, *dandan*, and oars, *dayong*, projecting from its sides is drawn at *c*, and a paddle, *ulu*, at *n*, and crutch-handles of paddles at *l*; *m*, all on pl. XXIII.

X531 A hooked fish-trap, *sergang pala tangga beji*, is indicated on pl. xxiv, *k*, which seems to mean a bamboo fish-trap at the head of a staircase or ladder. We have no translation for *beji*. A description of the different nets, baskets and traps used for fishing is given by Ling Roth (1, pp. 454–464). Two barbed fish spears, *ruit gansai*, are shown on pl. xxii, *p*, and a barb, *ruit*, on pl. xxiv, *j*.

The pursuits of the women are represented by shaped pieces of wood upon which the spun thread is wound, *tayok gasing*, at *a*, *b*, pl. xxiv, and at *c* a more elaborate example which possibly includes the uprights of that part of the spinning wheel through which the driving thread passes to the spindle. A weaving spool, or "netting needle", *jengkuan*, is seen at *e*. The ridges on a mallet used for beating bark-cloth, *surik gran pemalu tekalong*, are indicated in or suggested by certain patterns on *bidang* 35.859 and on other cloths. Women's combs, *sugu*, are represented at *g* and *h* on pl. xxiv.

NATURAL PHENOMENA

Representations of natural phenomena occur very rarely in the cloths; all the examples, except the moon, are to be found on *bidang* 35.859, which has unusual patterns, and these include clouds, possibly cumulus, *miga dudok*, and cirrus, *rayok miga dudok*, literally, "the clouds in steps", figured at *i*, *j*, *k* on pl. xxv, with a bird in flight against the cumulus cloud at *j*. Clouds are shown on cloths nos. 416, 418 in the British Museum. The moon, *bulan* (pl. xxv, *h*), is an unsatisfactory design on one of the *pua*, upon which the chief motive is an ambiguous design which was termed in Sarawak "*simpang taribang*" or "*simang taraba*"; we have a note which we cannot trace describing it as "making obeisance to the moon" (pl. 1, *j*). A rocky ledge upon which a tiger-cat is resting, *kaki padang remaung*, is shown at *e* on pl. xxv and occurs on the same cloth as the clouds. Tigers or tiger-cats are supposed to live in holes in the rocks and only the legs of the animal are seen in the design.

A very frequent design in borders of *bidang* and elsewhere is a zigzag which is constantly described as "crossing a river", *lelingkok semerai sungai*; it indicates the zigzag course frequently made by canoes when travelling along a river in order to avoid the stronger current (pl. xxv, *f*, *g*). "*Lelingkok*, crooked, zigzag", *S.D.D.*; it has been likened to the movement of a snake.

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GENERAL CONSIDERATIONS

We now pass on to a brief consideration of the broader issues connected with the Iban cloths and begin with a quotation from Hose and McDougall (1, p. 244):

"We are inclined to suppose that the Ibans have copied many of their cloth-patterns from the Malays together with the crafts of dyeing and weaving. For their technique is similar to that of the Malays all over the peninsula, and the same is true of some of their designs. Only in this way, we think, can we account for their possession of these crafts, which are practised by but very few of the other inland peoples. The fact that plant derivatives predominate greatly over animals in their designs, whereas the reverse is true of almost all other tribes, bears out this supposition, for the Malays are forbidden by their religion to represent animal forms, and make use largely of plant forms."

We have quoted in full here and on p. 123 what has been written on the decorative art of the Iban (with the exception of tattooing) by Hose and McDougall in their authoritative book on Sarawak, but we venture to question some of their statements. It is true that the carvings and engravings of the male Iban show predominantly plant forms, and the textiles of the women depict predominantly animal forms. If the men were influenced by Muhammadan Malays, why were not the women? The Iban have not embraced Islam and there is no reason why their designs should be influenced by that religion, nor is there sufficient evidence that they have borrowed some of their designs from the Malays; what designs they have in common might as well be attributed to their supposed common ancestry. The vast majority of the decorative designs of the Iban are not only markedly different from those of other Bornean peoples but equally so from those of the Malay, and almost all are intimately connected with their environment, pursuits, or beliefs.

The technique of producing the pattern by tying up the warps before dyeing is used only in isolated cases in the Malay peninsula. Other resist methods are referred to later. The Iban loom is the simplest of the Indonesian looms and therefore is not likely to have been copied from the Malay type with its fixed frame, heddles, treadles and other refinements.

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286 171 We have now to consider to what extent the Iban owed this part of their culture to other peoples, or if there is any evidence to show that the technical methods employed and the majority of the actual patterns have developed within the period of time in which they may be considered to have been a separate people.

A comparison has been made by L. E. Start between the cloths from Sarawak and the technical construction and patterns of the cloths of the Chinese, Hindu, Malay, or other inhabitants of the Indo-Chinese peninsula, as well as those of Java, Sumatra and the nearer island groups of Oceania.

The method of weaving is mostly carried out by the Iban in the simplest possible way on the most primitive type of Indonesian loom, the *tumpoh*, for although a few Iban use a simple Malay loom, the *tenjak*, they usually produce only coarse work upon it and that apparently in very small amount. We have no example of this in our collection, nor is there one in the large series in the British Museum, or in the collections in the Bankfield Museum, Halifax, or the Castle Museum, Norwich. The bulk of the Iban cloths and all the skilled weaving of the warp-dyed pattern cloths are done on the primitive *tumpoh*; this supports Ling Roth's argument that "if the Ibans had learnt [weaving] from the Malays I think we are more likely to have found among them an imperfect or degenerate form of loom, rather than a more primitive one than that used by the Malays" (1918, pp. 71, 72).

386 286 171 The patterned weaving in Europe and civilized Asia is based on employing coloured warp and weft threads, but this technique is lacking, or almost so, in Indonesia. There is one method of making designs on cloths in Great Britain and Europe in which the warp is printed before weaving and "shadow" patterns are produced. Cretonnes, linens, and silks may have "shadow" patterns.

In one technique in Indonesia the pattern is entirely developed before the actual weaving takes place and it is accomplished by tie-dyeing of the warp. This under skilful hands affords beautiful and elaborate patterns and it has a peculiar charm.

There are various terms for this tying technique in Indonesia. According to Loeber (1903, p. 14) the Malay and Iban term *ikat* was first introduced into Europe by Prof. A. R. Hein (1890), who in 1901 turned it into a Dutch verb "ikatten". We suggest that the word "ikat" might be

adopted in English for the finished product and "to ikat" for the technical process. 386 286 1-71

The method of producing patterns by tying-up the warps before dyeing is not in general use among the peoples of the Malay peninsula nor of those of southern China. The only account we have been able to find of the use of a similar technique is that by L. Wray (1902), who says that it is carried on to a limited extent by a few Malay women at Sitiawan in Perak. The fabrics are made of silk which comes from China in a raw state and is treated locally before dyeing.

The ikat method is nearly always used by the Iban and is carried by them to a degree of great excellence, but it is not confined to them in Indonesia. Lamster (1929, p. 125) refers to the bold and effective ikat technique of the women of Sumba and Flores and to the delicately worked and beautifully tinted patterns of Roti, Savu, Timor, Alor and other islands. The art of ikat weaving is practised throughout nearly the whole of Indonesia. Two pieces of hempen cloth from Mindanao, Philippine Islands, in the Haddon collection in the Cambridge Museum also illustrate this technique.

The woof, and not the warp, is ikated on the silk fabrics of Palembang, south-east Sumatra, at Gresik in east Java, and in Bali. At Tenganan, a small mountain village in south Bali, and nowhere else in Indonesia, the warp and the woof are ikated, a very difficult technique that produces cloths, termed *kain gringsing*, of unequalled beauty; they are the most splendid and costly of Indonesian woven cotton fabrics. Their manufacture is associated with all kinds of precautionary regulations; it can be done only in secret and the girls or women must work naked. Formerly the cloth was dyed with the blood of a human victim: the blood of animals must not be used; now they employ the bark of the *kemiri* tree, *Aleurites triloba*, with shredded *Curcuma* (turmeric) stamped in water. On various important occasions a person (or a young couple) is engirdled with a *kain gringsing*, and one wrapped round a sick person ensures recovery. The designs are mainly plant motives. (Lamster, 1929, p. 126; Wirz, 1931.)

Loeber points out that the material used for the tying is not unimportant. Winding cotton around cotton is ineffectual and the binding ribbon must be of some other material that takes the dye less readily than the cotton warp. The manner in which the warp is wrapped around is decisive for the

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386 character of the decoration. The simplest type is found on Flores, whence
286 Prof. Max Weber in 1888 brought back bundles of yarn in various stages
171 of "ikat". Each skein is tied round at regular intervals, and consequently uncoloured rings appear after the dyeing. That at any rate is what it looks like on the skein; when this is wound off the rings disappear and each thread is furnished with regular white dots. After the threads have been stretched on the frame of the loom they naturally come into a different order and an irregularly dotted background results—the parts that have been "reserved" from the dye have shifted their position.

The patterns in all these cases are different from those of the Iban and frequently the workmanship is less expert. Illustrations of patterns made by these techniques are given by the Dutch authors quoted and by others.

In some parts of Indonesia there is found another entirely different method of resist-dyeing, which is accomplished by applying wax to the fabric at those places where the dyeing is not desired. This highly developed *batik* technique, by which beautiful and elaborate patterns are made, is especially characteristic of Java. An analogous wax technique is used in southern China and by some Malays.

There are other methods of making patterned cloths in Indonesia, but these do not concern us here.

When Iban patterns are produced by other means than warp-tying, whether by floating shuttles, the use of more heddles or shed sticks, or by embroidery, the quality of the work is more variable and the patterns themselves differ from those characteristic of warp-tying. These technical methods may have been adopted by the Iban from other peoples, and their own patterns made by these techniques have suffered modification through these alien influences.

X 531 Among all the cloths in England examined by us, not more than 1 per
171 cent. of the patterns are like those of the Malay peninsula or the surrounding islands. The designs on our Bornean cloths have been compared by L. E. Start with traditional Chinese and Hindu designs, with those of the hill tribes of southern China, the Shan, Kachin and Burmese printed and embroidered fabrics, as well as with the resist-dyed fabrics of Java and Sumatra. With the exception of the occasional tendency to make a fret-like completion to a design, which does not necessarily prove anything, there

seems to be no outside influence in the style of the warp-dyed patterns of the Iban. 531X 171

The motives chosen, with the exception of the crocodile, do not seem to be used by the other peoples mentioned. A strong argument against Malay influence is the predominance of animal forms, which are forbidden by Islam. The sources of the patterns themselves are all intimately connected with religious beliefs, daily life and environment of the Iban. The animals are those with which the island abounds, the plants drawn are in daily use and indigenous to Borneo, and the remaining subjects are connected with agriculture and other daily pursuits and domestic objects.

We would however refer to the ambiguous *gajah* motive (pp. 41–43), which certainly is not Bornean. It seems to us quite possible that it may be a dim relic of some higher culture that presumably had its origin in India, but we cannot pursue this conjecture further owing to lack of data. The correspondence between the spiritual personages of the Iban and those of Hinduism is discussed by the Venerable Archdeacon J. Perham (cf. Ling Roth, 1, pp. 181, 182).

It is a remarkable fact that the textile designs of the Iban women are quite distinct from the patterns carved by the Iban men on bamboo and wooden objects (see Haddon, 1905), and these are also very different from those carved by the Kayan, Kenyah, Murut and other peoples of Sarawak with whom the Iban come more or less into contact. These peoples do not practise the art of weaving to any extent and they do not make the patterns characteristic of the Iban women.

Taking all these points into consideration it seems reasonable to suggest that the traditional designs used by the Iban women in their textiles have been developed since the Iban became separated from other peoples, and thus the designs would be a native art peculiar to the Iban. 286 531X 174

It has previously been stated (pp. 1, 2) that Dr Hose dates the migration to Borneo of the ancestors of the present Iban at less than three centuries ago. We wonder whether this highly developed technique could have reached such perfection within that period of time.

It is interesting to note that in some parts of New Guinea fibre skirts are tied in various places and dyed so as to produce horizontal stripes of a dark colour on the natural colour of the fibres. Loebèr (1903, footnote, p. 15) 286 386 171

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states that he saw, in Barmen in New Guinea, petticoats which had been dyed by this manner in three colours; probably one colour was the natural colour of the fibre. This method of resist-dyeing is probably an ancient one and doubtless will be found to have a wide distribution in scattered areas.

There are other methods of resist-dyeing in Melanesia in which the finished cloth is tied so as to resist the dye. Tie-dyeing of cloth is also practised in West Africa.

It does not appear unreasonable to regard the tie-dyeing of the warp of the cloth by the Iban as a development and refinement of the similar though crude technique now seen in certain fringe-like fibre skirts elsewhere. In the British Museum a fringe on a Konyak Naga *dao* (a knife-chopper) is of goats' hair with transverse bands of red dyed by this technique.

IBAN RELIGION AND ITS EXPRESSION IN DECORATIVE ART

A brief account of the personnel of Iban religion will help towards an understanding of some of the designs shown on the cloths. This is abstracted from Perham as quoted by Ling Roth (1, pp. 168–213).

The Iban believe in an indefinite number of spiritual beings termed *Petara*; these "gods" have their several functions. Some Iban say that there is only one *Petara*, but when confronted with the references to many gods in their incantations they explain this as merely implying a unity of origin, which does not amount in their minds to a conception of a First Great Cause. An *antu*, or spirit, causes sickness or wants to kill persons and so has to be scared away, but *Petara* is regarded as saving power, the preserver of men; in extreme cases *Petara* alone can help a man; if he dies it is *Petara* alone who has allowed the life to pass away.

The moon and stars are not invoked, but they have an "invisible belonging", a *Petara*, just as all parts of the earth have. It is probable that no inanimate objects themselves, not even the sun, are supposed to be divinities; "it is an underlying spirit in them which is adored, a hidden living influence in them which effects their operations" (Ling Roth, 1, p. 201).

Three beings with definite functions occupy a peculiar position in Iban belief. (1) *Salampandai*, a female spirit and the maker of men. (2) *Pulang*

Gana, the tutelary deity of the soil and the spirit presiding over the whole work of rice-farming. (3) *Singalang Burong*, whose name probably means the Bird Chief. The Iban trace their descent from him and from him they learned the system of omens, and through the flights or calls of the omen-birds, his sons-in-law, he still communicates with his descendants. "These birds", said he, "possess my mind and spirit and represent me in the lower world. When you hear them, remember it is we who speak for encouragement or for warning" (Ling Roth, I, p. 200). His earthly form is the kite, *Haliastur intermedius*, a sub-species of *H. indus*, the Brahminy kite, which is reverenced by Hindus as sacred to Vishnu. He may also be said to be the Iban god of war and the guardian spirit of brave men. Hose and McDougall (II, p. 86) state that the Iban say that *Singalang Burong* never leaves his house and that for this reason they do not take omens from the hawks when going on the warpath.

The observance of omens occupies a large share of the thoughts of the Iban, and the system as carried out by them is most elaborate. The birds "used" by them are: *Membuas* (a kingfisher, *Carcineutes melanops*), *papau* (a trogon, *Harpactes diardi*, or ? *Dendrocitta cinerascens*), *beragai* (a trogon, *Harpactes duvaucelli*), *kutok* (*Lepocestes porphyromelas*), *katupong* (a woodpecker, *Sasia abnormis*), *nendak* (a kind of thrush, *Cittocincla suavis*), *briak* (*Orthotomus cineraceus*, the tailor bird, or *O. ruficeps*), *bejampong* (a shrike, *Platylophus coronatus* or *Hydrocichla frontalis*), *Enkrasak* (the spider-hunter, *arachnothera*, three sp.). The system also embraces the *rusa* (the deer, *Cervus equinus*), *kijang* (barking deer, *Cervulus muntjak*), *plandok* (mouse-deer, *Tragulus*), and sometimes even *aji* (the moon rat), *tengiling* (scaly anteater, *Manis*), *tandah* (bat), the *sawa* (python) and *tedong* (cobra), *tuchak* (house lizard, *gecko*) ("a species of grasshopper", *S.D.D.*), and the following insects *rioh*, *rejah*, *burung malam* (a cricket, *Gryllacris nigrilabris*). All these may be omens in various ways and circumstances and therefore, in this connection, they are designated *burong* (birds), and to augur from any of them is *beburong*. But these other creatures are subordinate to the birds, from which alone augury is sought at the beginning of any important business. Augury is sometimes taken from other animals. In the *S.D.D.* (p. 16) it is stated that the eight relatives or followers of *Singalang Burong* are: *beragai*, *katupong*, *bejampong*, *membuas*, *kutok*, *nendak*, *papau*, *briak*. Called

"birds" but holding a lower place and not considered "sacred" (indeed they are often eaten) are the insects *rioh*, *rejah* (grasshopper) and *burong malam* (ground cricket); the snakes *tedong* (cobra), *sawa* (python); the animals *rusa*, *kijang*, *plandok*, *remaung*, *tengiling* (the *Manis*), *aji* (moon rat), *engkarong* (the skinks), and bat. Good accounts of the omen animals of Sarawak are given by Ling Roth from various sources (1896, I, pp. 191–197, 221 ff.), Haddon (1901, pp. 381 ff.), Hose and McDougall (1901, pp. 173 ff.; 1912, II, pp. 51–90), in all of which references are made to the Iban. The most authoritative account of the religion and the omen animals of the Iban is that given by the Ven. Archdeacon J. Perham (see Ling Roth).

The Iban has surrounded himself with thousands of *antu*, or spirits, which are supposed to fill earth and air, sea and sky; they are adversaries or helpers of men, and the difference between them and *Petara* is imperceptible. The good ones are nearly identified with *Petara*, of whom no evil is predicated; but the bad and angry spirits are far more numerous than the good ones. *Antu* may appear to men as animals, such as deer, python, crocodiles, etc. In order to communicate with the supernatural, an Iban may *nampok*, sleep on the tops of mountains with the hope of meeting with the good spirits of the unseen world, but this custom is now much less frequent.

Some Iban men, and they mainly or solely Ulu Ai Iban, have a *ngarong* or secret helper, usually the spirit of some ancestor or dead relative, who may or may not inform the individual Iban to whom he manifests himself in what form he will appear in the future. An Ulu Ai Iban of the Batang Lupar informed Dr Hose that every Iban who has no *ngarong* hopes to get some bird or beast as his helper at the *begawai*, the feast given to the *Petara*. As the *ngarong* is one of the very few topics in regard to which the Iban display any reluctance to speak freely (Hose and McDougall, II, pp. 90 ff. and *J.A.I.* XXXI, 1901, pp. 199 ff.), it is very improbable that the animal form of this mysterious secret, the *ngarong*, should be represented on a cloth. It seems probable that the *ngarong* is an institution related to the *nampok*. There may have been some connection between the gaining of a *ngarong* and *nampok*.

The *engkaramba* figures that ward off harm have been noted on p. 105.

Very many of the designs and patterns appear to have been adopted for some reason connected with Iban beliefs; the choice of the motive to some extent may correspond with the ultimate use to which the cloth will be put.

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Pua, or blankets, which may be used on ceremonial occasions as well as for coverings, are frequently decorated with anthropomorphic and crocodile figures. We do not know whether there is any connection between the representations of crocodiles and the belief that spirits of the departed may choose crocodiles as abiding places.

The *kalambi*, or coats, particularly those worn by the men, are often ceremonial garments and are usually patterned chiefly with omen birds and animals, doubtless in order that their good influences may be experienced by the wearer. In such a highly specialised coat as 35.904 (pp. 37–46) the patterns suggest that it was worn by a man who conducted the most important of Iban feasts, and we suggest that it was the property of a *manang bali*.

The everyday garments, the *bidang* and the *sirat*, are decorated with less important motives.

Those on the *bidang* are more varied and interesting and consist chiefly of mammals, birds and other animals; there are also some plant motives, mostly the *bangkit* fruit and the *tangkong* creeper with its hanging blossoms. The crossed posts of houses and the wedge usually occur together, and there are examples of fire-places, a boat, and paddles. The arenga palm and mast ("acorn") patterns are frequently used in the borders and both are of importance in the daily life of the Iban, who make toddy and sugar from the juice of the flower and ropes from the black fibres of the trunk of the arenga. The pig is one of the animals always found in abundance near an Iban village, and the so-called "acorn" *empili* is really the nut-like fruit of a tree greatly liked by both tame and wild pigs, but "mast" is a better designation. The blossoms of the *bangkit*, and probably those of the *tangkong*, are sweet-smelling. The plants and flowers and the objects of material culture are all intimately connected with the needs of daily life, shelter, food and adornment.

Many of the designs or patterns on the *sirat*, or loin-cloths of the men, are mainly or solely confined to them, and doubtless have a special reference to the pursuits (such as the paddy fields), dangers or interests that more particularly affect men. Very common are parts of the creatures that injure crops, such as pigeons or other birds, and locusts. A curious design is that called "sleeping cats".

It is characteristic of the Iban, as well as of other peoples in Borneo, that

771 It is characteristic of the Iban, as well as of other peoples in Borneo, that the whole of their life is permeated with religious conceptions, and indeed no distinction can be drawn in their daily life between technical and religious operations: they are equally necessary.

771 In the background is the belief in *Petara* and in the associated lesser
776 agencies, also known as *petara*, who appear to be in practice the executive staff of *Petara*.

771 It is futile to attempt any operation of importance without the assurance
776 that *Petara* sanctions it, but this approval can only be ascertained by the
787 messages that he conveys through omens. The most common of these messengers are omen birds, and anyone who has lived in Sarawak is fully aware of their importance.

771 The designs and patterns on the cloths clearly indicate this psychic
X531 attitude towards everyday life. They may be regarded in some cases as being protective, to ward off dangers of various kinds, in others as being a means to obtain blessings and good fortune. Thus they express a constant reliance upon supernormal power, and it is probably no exaggeration to say that these attractive people are literally clothed with prayers.

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VOCABULARY OF IBAN WORDS USED IN CONNECTION WITH THE CLOTHS AND IN DESCRIBING THE PATTERNS

The English equivalents have been taken from the *Sea Dyak Dictionary*, from translations by Dr C. Hose on numerous labels and from information received in Sarawak. We have omitted those words for which we could not find a translation. We are painfully aware of the imperfections and inadequacy of this list of words, but it is the best we can offer to students from the material at our disposal.

A-a: an open slit
Adap: manner, way, from or on the side of, towards
Aji, aji bulan: white shrew, moon rat, a title for the god Kling (Malay *tikus bulan*, rat, moon), *Gymnura raffesi* (pp. 72, 126, 127; pls. v, vi)
Akar: a creeper, anything that can be used for binding
Aki: grandfather
Aki Ungkok: Grandfather Ungkok, the man in the moon. He is also spoken of as "the ancient Ungkok, the brave leader" (pp. 64, 124)
Ambun: dew, fog, mist
Ampat: four
Anak: a child, young of animals and plants
Andi: rumour
Andin: ? fabulous, imaginary
Angkong: a species of *Mangifera* (mango); a tree bearing strong-scented, diamond-shaped fruit, the horse-mango (p. 134; pl. XXII)
Antu: ghost, demon, spirit (pp. 130, 142, 144)
Anyam: to weave, the plait (of baskets or mats); *anyam belebai*, woven stripes imitated by using a needle (p. 102)
Api: fire
Ara: stripes of different solid colours, to arrange different coloured stripes; to spread out
Ariniek: alternate markings
Asi: cooked rice; a victim, prey; fair, right, proper

Baju: a coat
Baku: a brass betel-box
Bala: a multitude, a war party
Balang: a bottle; unsuccessful; *leka balang*, an enemy's head
Bali, mali, bebali: to exchange, change colour, fade; an alteration
Baloi: a striped kind of bamboo
Balu: a widow, widower
Balut, bebalut: a band, small bundle; to wrap up, entangle
Bangkit: a scented flower, scented leaves or fruit of certain jungle trees used as scent or personal ornaments. Sometimes described as a creeping (? climbing) jungle plant (p. 134; pls. XVIII, XIX, XXI)
Bara: a tumour, a knot of wood
Batang: trunk or stem of tree, a tree, a stick, main branch of a river or road
Batebok: to make holes like a woodpecker
Batu: stone, rock
Baya, baia, jagu: crocodile (pp. 129, 145; pl. XI)
Bayak: the iguana, *S.D.D.* This is the monitor lizard, *Varanus* sp. (p. 129; pl. XII)
Be, bel, ber: the inseparable prefix which expresses a state or condition of being and thereby denotes the intransitive state of the verb
Bedayong, berdayong: to row with an oar, rowing
Bedong: a woman's girdle or waist band (p. 102)
Bejangkam: to squeeze (with thumb and finger), to nip
Bekait: to hook, hooked, ? crossed
Bekarong: to cover, conceal, enclose in a case

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Bekatapu: wearing a war-cap
Bekaul, berkaul: twisted over one another, entangled, ? crossed
Bekengkang: to be striped
Bekikiang: crooked
Belambang: alternately, not regularly
Belingkian: the argus pheasant (p. 37)
Bendar: true, very
Bengkah: a division, class, lot, to put aside
Beparang: to cut (*parang*, sword, chopper)
Beprang: to make war, attack
Beradap: facing (*aji beradap*, shrews facing one another), to interview face-to-face. See adap (pl. v)
Beranak: to give birth to
Berasok: overlapping, to put on, fit together
Berayah: outstretched wings or hands; a ceremonial dance performed by chiefs leaping up with their arms extended in imitation of a soaring kite (p. 117)
Beringan: a collection of any articles tied together
Beringin: a fruit tree (p. 70)
Berkingking: a brass bangle
Berspit: grasp with claws
Besampan: a small native boat, a canoe (p. 135)
Besarang: to build a nest
Besarong: to encase, sheath
Besepit (bespit): to take between the fingers, or with a pair of tongs or pincers; provided with nippers or claws
Besi: iron
Besimpan: to pack up (coiled)
Besugu: with a comb
Besumpiang: to fill up, complete, finish off
Besurong: to push on
Betampong: a ceremony to cure sickness
Betangkal: to have a notch in a post for a cross-bar
Betangkin: to gird on a sword
Betayok: calling attention with the hand, to beckon ("to strike with the open hand", *S.D.D.*)
Betegam: to swallow all at once, to bolt food
Betong: a large bamboo used for carrying water
Betulak, betula: to push off, put aside, make a departure, to go in opposite directions
Betunga: face-to-face, opposite, interview
Betungku: to thresh paddy
Bidang: a petticoat (p. 52)
Bingka: a root
Bintang: a star
Biyak: see bayak
Brang: the upper arm
Brani: brave
Bras, brau: uncooked rice
Bruang: a bear, *Helarctos malayanus*
Buah: fruit
Buan: a small shrub whose fruit and flowers are the favourite food of the mouse-deer, *plandok* (p. 84)
Bubul: a collection, to add to, to fill up spaces; *bubul lapang*, a pattern so described as it fills up a space; *bubul jerit*, the pattern collected together to fill up the space; the pattern completed
Buchai: a fringe
Bujak: the monitor lizard, *Varanus* sp.; a spear
Bukang: a headless corpse
Bulan: the moon (pp. 122, 136, 142)
Buloh: a bamboo which grows very high; *buloh bala*, a yellow bamboo
Bulu: a feather, quill, hair
Bungai, bunga: a flower, the name of a snake
Bungkok: bent back, bent, hunchbacked
Buntak: a locust; *buntak balang*, a large yellow grasshopper
Bunut: the horse-mango, *Mangifera* sp.
Burak, borak: white
Buri: "cowry shells which are sewn as ornaments on jackets, petticoats, etc.", *S.D.D.* These are *Nassa*, not *Cypraea* shells (p. 49)
Burong: a bird (pp. 127–129; pls. VII, VIII, IX), an omen. For omen birds and animals see pp. 143, 144. *Burung belingkian*, the argus pheasant; *burung malam*, a night omen, a kind of cricket
Buyah: a beetle, a species of moth (p. 119)

Chayam: pig's whiskers?
Chelum, chilom: black

Dabong: serrated, notched, dog-toothed
Dadong: a shawl
Dandan: a platform at the stern of a war-boat
Dangdong: a shawl worn by a man in full dress (p. 103); "a Malay *sarung* or long skirt", *S.D.D.*
Dapur: a fire hearth, a cooking place
Daun: a leaf; *daun uri*, rattan leaves (p. 134, pl. XXII)
Dayong: an oar; shoulder blade, scapula

Deman: a species of fern, *Gleichenia dichotoma*
Di: at, on, in
Dilah, dila: the tongue
Dua: two
Dudok: in steps; to sit, settle, reside
Dulang: a wooden dish or trough

Embayar: a phosphorescent centipede (p. 132; pl. xvi)
Embun, ambun: dew
Empalai: a little garden, a small paddy farm
Empetut: a grub; alternate light and dark square markings as on the snake (*ular* or *urar*) called *empetut*, *Tropidonotus petersii*
Empili: a tree producing a species of wild nut, the favourite food of wild pigs. This is best translated by "mast", the fruit of various forest trees, especially as food for swine (pp. 62, 133, 145; figs. 28, 29; pl. xviii)
Empirjungau: a long-nosed fish
Emplawa: a spider (p. 131; pls. xiv, xv)
Engkaramba, engkramba: some kind of man or male personage; a representation of anything cut out of wood, used to prevent harm from coming to crops, etc. (pp. 40–44, 105, 106, 111–113, 124; pl. 1)
Engkarong: a species of skink lizard, *Lygosoma*, sp.; *engkarong kijang*, a stiff skink lizard
Engkatak: a frog (pp. 130, 131; pl. xiii)
Engkerbai: a shrub (pp. 11, 21)
Engklait: wild gambier, *Uncaria gambier*, a shrub which climbs by means of hooked spines; it is used medicinally and is extensively employed for tanning and dyeing. One of the most powerful of astringents
Engku, enk: my, mine
Engkudu: red; a plant of which the skin of the root produces a red dye
Entadu: a caterpillar
Entali: string
Entepa: outstretched wings or hands
Entibap: the palm, *Arenga saccharifera* (pp. 133, 145; pl. xxii)
Entilan: a boat shed
Entilang: a framework of an Iban cooking place (p. 65)

Gajah: an elephant (pp. 41–43, 141)
Gajai: a mythical creature, something like a frog (pp. 105, 106, 114, 115, 130, 131)
Gambar: a picture; *gambar mensia*, portraits of people
Ganual: a spear with one barb
Gari: a garment, clothes
Gasing, gasieng: a spinning-wheel, top, to spin (p. 7)
Gawai: a feast
Gelang: a handle (of a shield)
Gelegar: the flooring of a house
Gelong, giling: to roll up, to curl
Gelong paku resam: curled top of the *rèsem* fern (p. 134)
Genok: a gourd, white pumpkin (used as a water vessel); a gourd with a long twisted stalk, the fruit is used as soap (p. 134)
Gerunggong: a joint of the larger bones
Gigi: a step of a ladder; tooth
Grama: a fresh-water crab (p. 66)
Gran: to cut with a knife
Gran pemalu tekalong: grooves in the bark-cloth mallet
Grunong: small bells used as a fringe, "hawk-bells"

Home: a plant used instead of indigo (p. 20)

Igi: seed
Ikan: a fish
Ikat; ngikat, beikat or bikat: anything tied up; to tie, bind
Iko, iku: a tail
Imbai: horizontal, alongside, side by side, next to
Indang: soaring, to lift the arm; a sieve
Indu: a woman, female of any animal
Ipoh: a tree, ? *Antiaris* sp., from which a white bark-cloth is made for *pua*; *A. toxicaria*, the sap of which is very poisonous (p. 4)

Jagu: the crocodile
Janga: an angle
Janggat: a white pumpkin, a fruit resembling a vegetable marrow
Jangkam, bejangkam: squeeze
Jangkit: a tree the bark of which gives a red dye *kara jangkit*, a tree, *Ficus* sp.
Jari: a hand
Jaul: twisted?
Jelu: wild, a wild animal
Jengam: to press with a forked stick
Jengkong: curved, to bend round, arch

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Jengku: an artificial spur, curved, bent
Jengkuan: a netting needle; a weaving spool (pl. xxiv); a kingfisher
Jerit or **jarit**: the horizon
Jerit: many, in order, in series, a branch; *jerit betaya*, to beckon with the hand?
Jernang: a species of ratan, *Calamus*, employed in house-building; from the fruit is obtained the red "dragon's blood" which is used as a stain (p. 20)
Junggur: a snout, point of land

Kabu: the fringe of a *sirat*
Kain: cloth, clothes, woman's petticoat
Kait: a hook
Kaiu, ? kaiku: a kind of tree
Kaki: a leg, foot; foot of a hill or ladder
Kala: a scorpion (pp. 47, 132)
Kalambi: a jacket, coat (p. 22)
Kanggan: Chinese black calico
Kanji: rice gruel; sensuous
Kanulong: a long-nosed fish
Kapayang: a plant, *Pangium edule*
Karak, ? kara: scattered, spread or pour out
Karam: sunk, immersed
Karong: a coverlet, case, bag
Katapu: a cap, war-cap
Kebat, ngebat: tie, bind
Keberair: best
Kejong, kejoh: stiff
Kelabong: a scorpion
Kelalin: to interlace, tie, or fasten a wooden flooring with ratan; in basketry, plaiting like the *nibong* floor of a house
Kembóng: swollen, full
Kendawang: a snake with a red head, red tip to its tail and body striped black, white, and red, *Cylindrophis rufus* (pp. 29, 36, 55, 112, 130), which is not poisonous; or doubtfully *Callophis flaviceps* (p. 68), this is a synonym for *Doliophis bivirgatus* which is poisonous
Kengkang: a stripe or knot
Kenyalang: the hornbill, *Bucerus rhinoceros*
Kepong: cut off, amputate, surround, tailless
Kerchpaka: a kind of fruit
Ketam: a crab (pl. xvii)
Ketup, ketupang: bite
Klabumbu, kelamambang, klabembang: a butterfly
Klait: see **engklait**
Klapong, kelapong: the end or remnant of anything, a fringe; "*Tu klapong sirat iya*, this is the fringe of his waist-cloth", *S.D.D.*
Koali: a cotton-stretcher
Kris: a dagger
Kukut: a claw, talon, nail
Kumbu, pua kumbu: a coverlet or blanket
Kunding: nominally an omen bird, but really a cricket, *Gryllacris nigrilabris*, used as an omen (p. 143)
Kuning: yellow
Kunyit: turmeric, *Cucuma longa*, the plant from which the yellow dye is obtained; some species supply starch

Labang: white
Labong: a headkerchief, head-covering
Labu: the white pumpkin, gourd, *Cucurbita lagenaria*
Lachau, lachaur: a green grass lizard (p. 130; figs. 13, 30; pl. xii)
Ladang: a bulwark, bank of earth surrounding a paddy farm; (*beladang*, to separate, *S.D.D.*). A farm or a division of land. C.H. (p. 135)
Ladi, ladei: separate, ? a spot
Ladu: mud used as a black dye
Laki: a male of human beings or animals
Lalat: a fly
Lalau: a hand-rail; a bees' nest on a tree
Lalin: in-and-out (as of plaiting)
Lancham: pointed, cut to a point
Landak: a porcupine, *Hystrix*
Lang: a kite, the bodily form of *Singalang Burung*, the Bird king; *kruhkang lang*, striped kite (p. 128; fig. 186; pl. x)
Langgai: the extremity of anything, the longest tail feathers of a bird
Langgu: a pendant, young fruit; *langgu lungping*, earring
Langit: the heavens, sky
Langkiang: a kind of lizard with a long tail
Lantai, luntai: split bamboo or cane; the floor of a house
Lapang: spacious, roomy, an open space, an opening; *bubul lapang*, space-filling
Leka, lika: a seed, grain; give up, let go
Leka balang, leka nanga, leka mudan: an enemy's head
Leku: bend, curve
Lelambak: the flower pattern plaited in mats (pp. 31, 104, 135; pl. xxii)

Lelayang: a swallow, *Hirundo*; a swift, *Chaetura*; *lelayang bata*, *Collocalia fuciphaga* (fig. 13; pl. IX)
Lelingkok: curved, crooked, zigzag
Lemba: leaf of *Curculigo latifolia* used for tying warp threads preparatory to dyeing
Lemiding: a creeping fern, *Acrostichum scandens*; the tops are used as a vegetable by most tribes
Lensat: a fruit tree, *Lansium domesticum*
Lia, liah: ginger, *Zingiber officinale* (p. 134; pl. XIX)
Likau: a zigzag decoration, striped like a python or tiger
Lilit: gold embroidery, yellow, a binding
Lintah: a leech (p. 133; pl. XVI)
Long: a Kayan bark basket; a species of grasshopper
Luas: wide, spacious
Lunju: a spear with a narrow blade

Macham: sort, species, kind
Malam: night
Mampul: re-tying
Manah: good, beautiful
Manang: a medicine-man (or woman); *manang bali*, "a sham-female witch doctor", *S.D.D.*; a medicine-man who behaves as a woman (pp. 40–46, 145)
Manok: a domestic fowl
Mansau: ripe, red, cooked
Marau: a large cane, *Calamus* sp.
Marik, mariek: a bead, bead necklace
Mata: an eye, edge of a weapon; raw, unripe
Mayang, the blossom of palms
Mayau: a cat, a wild cat, *Felis bengalensis*; *mayau tindok*, sleeping cat (pl. XVII)
Melanjan: a wild species of *rambutan*, *Nephelium*
Melintang: crossways, across
Menaul: a hawk, kite
Mengicatak: a frog
Menyembang, Menimbang: *bulan menimbang*, name of a god in the heavens (p. 122)
Mensia: people, persons
Menyeti: the best kind of *pua*
Miga: clouds (p. 136)
Mudan, leka mudan: an enemy's head
Mulai: to twist back
Mulut: mouth, the lips
Munsang: a wild animal
Munti: a species of small bamboo the shoots of which are eaten

Nabu: rolled up in a ball
Nadai: no, not
Nakar, ngar: a special red dye
Nama: name, reputation
Nandok, betandok: to butt, to gore, to cup; cupping is done by gashing the flesh and sucking out the blood by means of a bamboo cylinder [or a horn?]
Nanga: the mouth of a river; *leka nanga*, an enemy's head
Nemaiar: a centipede (p. 104)
Ngelambai, lambai: to wave, beckon to, shout to
Ngelepan: a centipede (pl. XVI)
Ngikat: see ikat
Nibong: a thorny palm, *Oncosperma tigillaria*
Niga: the sky (white clouds in the heavens visible only on fine days or nights); *niga dudok*, clouds on the horizon on a fine day (*dudok*, sit)
Nya: that, those
Nyandih, penyandih: lean against
Nyang: sunset
Nyangking: ? by itself; *jerit nyangking*, a pattern by itself

Orang: a man, person, people

Padang: a cleared piece of land, field; renowned
Padi: rice in the husk
Padong: a bed place; rocky ledge across a river bed; shelf; *padong buah*, a fruit store
Pakan: the woof in weaving or plaiting, *S.D.D.*
Pakan belebas: a small striped pattern formed by grouping warp threads together with the weft or woof, so leaving spaces, as this is done with a needle it is termed needle-weaving (pp. 94, 96, 97, 102)
Paku: the general name for ferns, particularly *Hoplenium esculentum*
Pala: the head; *antu pala*, the smoke-dried head of an enemy
Pama: a species of frog; well, good
Pampul: to cover, cover the face with the hands
Pandin: a buckle
Panggal: a pillow, resting place
Panjai: long

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Pantak: a small dark-coloured wasp (p. 132)
Pantak penandok: the wound caused by the sting of a wasp? or perhaps the clay nest of a wasp, or even scarifying the skin preparatory to the cupping process (pp. 74, 113, 118, 132)
Pantok, bepantok: the bite (of a snake, bird, etc.), peck (as a fowl); the shoot of a plant
Papan: a plank, board
Pasak: a wedge; a paddy-destroying insect
Pating, patieng: the stem of a flower, bunch of fruit with its stem, a twig
Patok: a beak or bill of a bird; tender shoot of a seed
Patong: the knee; *pala patong*, knee cap
Paya: swamp land, a wet-land paddy farm (p. 135; pl. XXV); *sirat paya* an especial kind of waist-cloth
Payong paya: cleared space in swamp land
Pe, pem, pein, peng: the inseparable prefixes used in the formation of derivative nouns
Pedalai: the bread-fruit tree, *Artocarpus incisa*, and also the jack-fruit tree, or *jaca* tree, *A. integrifolia*, from the wood of which a yellow dye is obtained (pp. 4, 19)
Pemadu, pemadam: the end of anything
Pemalu, permalu: a bark-cloth beater or mallet; *pemalu tekalong*, a mallet for beating the *tekalong* bark to make it into bark cloth
Pemigi: a cotton-gin
Pempang: a fence
Pemuchok: a shoot of a plant
Penan: a shelter, defence
Penandok: see **nandok**
Pendal: stuck fast
Pendawan, penawan: a fish-spear with a single barb
Penjuang: posts on either side of the staircase supporting railings, cross-pieces, wood or sticks in the shape of an X
Penukoh: possibly a flowering tree, but Hose says the meaning is uncertain; trestles
Penukok, punchok: a shoot
Penumboh: a growth, opening, foundation
Penuri, penori: thorns, spiky, hole made with the finger, pressed down
Penyadi: condition, existence
Penyandih: lean against
Petara: spiritual beings who have their several functions. Some Iban say there is only one *Petara* who has saving power (pp. 105, 115, 142, 144, 146). "A god, gods. It is probably a corruption of the Hindu *Avatara*", *S.D.D.*
Petik: spotted
Pinang: a palm, *Areca catechu*, "betel" nut
Pisang: the banana, *Musa sapientum*
Plangka, pelangka: the paddy foot-sieve through which by stamping paddy the grains fall through and the stalks and the ears remain. An oblong wooden frame about 6 ft. by 3 ft. enclosing rattan-work which is used for threshing paddy; a propitiatory offering on behalf of a sick person, the offering may be a common plate or a square wooden box without a cover standing upon four ornamental legs. When a person is taken ill the medicine-man, *manang*, sometimes recommends that the ceremony of *sant* be gone through, a *plangka* is then got ready for the *sant* ceremony (p. 78; pl. XXIV)
Plir: testes
Prut: a stomach, breast, intestines
Pua: a blanket, the old blankets of the Iban were made of bark-cloth; *pua tengkebang*, a blanket with a new pattern, the maker must not copy any other (p. 106)
Puchok, munchok; bepuchok: a point, top of anything; to attain the summit
Pun: a tree, stem, origin, basis, foundation, commencement
Puna: a green pigeon (*Treron*, all species except *T. capellei*) (p. 129)
Punggang, punggai: the end
Punggong: the waist
Pusat: the navel, centre

Raia: large; *burung raia*, a heron, *Ardea sumatrana*
Rambut: a fringe
Rambutan: a lofty fruit tree with hairy fruit, *Nephelium echinatum*
Randau: a creeping plant, a creeper of any kind, a parasite
Raras: a small stick or branch; likeness, picture; build
Ras: a farm, a cleared space
Ratan: a climbing plant, *Calamus* sp., the Skarang and Saribas Dayaks use the word *rotan*, but the other Dayaks call it *uvi* (p. 133; fig. 13; pl. XXII)
Rawai: a Dayak woman's corset made of rings of ratan strung with brass rings

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Rebong: a bamboo shoot; *muchok rebong*, cone-shaped
Rejang: to bore a hole, pierce or thrust upwards
Rekong: the neck
Remang: light fleecy clouds (not rain clouds)
Remaung: a tiger cat, *Felis nebulosa*; *remaung raras*, *F. marmorata*; *remaung bendar*, the true tiger (pp. 69, 71, 126; pl. IV)
Résam: a species of fern, *Pteris arechnoidea*, which usually grows in secondary jungle where the primeval forest has been destroyed (p. 134; pl. XVIII)
Resam: to press down with the hand, make a hole with the hand or finger
Riang: a creeper the leaves of which are eaten
Rinik, renik: close to
Rotan: see ratan and sega
Ruai: the verandah or long reception room of a Dayak house; *burong ruai*, the argus pheasant
Ruat: stripped; pull out, overflow; numerous
Rumah: a house
Ruman: ears of grain after threshing, chaff
Rundai: hanging down, dangling (pl. XX)
Rusa: the deer *Cervus equinus* (p. 125; pl. III)
Ruyit, ruit: barb of fish spear

Sabaka: equal, alike
Sabong: fighting, butting, to match, to set cocks to fight
Salampandai, Slampandai: the maker of mankind (pp. 131, 142, 151)
Salapok: a skull-cap made of ratan or pandanus
Samak: a reddish brown dye obtained from the *samak* tree (p. 19)
Samoa: all, everyone
Sampan: a small native boat, a dugout canoe
Sampok: a white ant, termite
Sandong: a jungle tree with fruit
Sanggol, sanggul: a braid, roll, plait of hair, *S.D.D.*; a knot, a tendril
Sarang: a nest, dwelling-place
Saribu: a thousand legs, millepede
Sarong: a case, sheath
Satu: one, first, good
Saut: an answer, reply; a *manang* ceremony performed when a person is ill. The ceremony is fully described in *S.D.D.*
Sawa: a python, *Python reticulatus* (p. 130); paddy sown in a nursery plot and transplanted to the wet field
Sawang: an opening, hole, to enlarge a hole
Sayap: a wing
Sega: a species of ratan; there are two kinds of *sega*: *sega balau* (or *bālu*) and *sega enseluang* (*enseluai* or *ikan*), a smaller and more valuable kind of cane, *S.D.D.* See buloh, ratan and rotan
Selam: to dive, diving
Selampur: the whole, all; *serampor*, of one colour
Selempepat, sepepat, semperpat, slampepat: fireflies (pp. 117, 134; pl. XXI)
Semalau: a species of thrush, *Copsychus amaenus*
Sembrang, semberai, semerai: to go across water or a boundary
Semerai: to cross over
Sengayoh: a paddle
Senggang: a species of gigantic lily
Serepang, serpang: a fork, trident, split, slit
Sergang: a bamboo fish trap with a wide mouth, a bamboo receptacle for plates
Serok genok: a white pumpkin (used as soap by Dayaks)
Serpan, serpang: dark
Serundan: usually *kain serundan*, a petticoat with the central part plain and coloured borders (p. 85)
Siko: one person or animal
Siku: the elbow
Simbang: a corner; to sharpen a bamboo or piece of stick by cutting it on one side only into a point
Simbing, Simbieng: one-sided, crooked, aslant
Simpan: keep, put by, hide
Simpang: the branch of a path or a river, a junction
Simpong, besimpong, sesimpong: to cut in two; to cut off the top of anything
Singalang Burong: the Bird-king who once appeared in human form, but is manifest as a kite, *Haliastur intermedius*, a sub-species of *H. indus*, the Brahmin kite (pp. 33, 46, 128, 143, and *S.D.D.* p. 157)
Sirat: a waist or loin cloth, the *chawat* of the Malays (p. 91)
Sit: a cluster of *pinang* nuts
Skelat, sklat: red flannel
Skut: foundation
Slaku, selaku: a ratan used as a rope for climbing trees
Spiak: one side only, half

104 **Spit, sepit**: pincers, tongs, nippers, claws
Srepang: a spear with three points, a trident, a fork
Sugu, besugu: a comb (fig. 13; pl. XXIV)
Sulor nyang: break of day, the colours of the sky at dawn
Sungai, sungei: a river, stream, brook
Sungkit, sunkit: a bone needle used for embroidery; *kain sungkit*, an embroidered cloth (p. 88); *kesungkit*, to prick, pierce, insert
Suri: a ripple on the water
Surik, suriek: stripes, striped
Surong: a temporary bridge or path made of poles; push on, push

Tabor: sprinkle, scatter, sow (seed)
Tali: string, rope
Tampok: a fruit stalk; ? a knot
Tampong: follow, join, splice, sew on, patch
Tanda: the stem of a palm blossom
Tanda: a sign, mark, figleaf ornament, ? decorated; *tanda sirat*, the embroidered end of a waist cloth
Tandok: horns, antlers, see **nandok**
Tangai: a thorny tendril?
Tangga, tanggai: the notched pole which serves as a ladder up to the floor of a house, a ladder
Tangga ubong: a tying frame (p. 9)
Tanggi: a sun-hat
Tangkai: a peduncle, fruit stalk, bunch of fruit; ear of paddy
Tangkal: a notch
Tangkin: a sword (scabbard and belt)
Tangkong: a jungle (? climbing) plant with scented pendant flowers (p. 133; pl. XX); the horny excrescence on the beak of the hornbill; ? a handle or knob (p. 134)
Tangku: the supports of a cooking-pot
Tanjong: *Mimusops elengi*, a tree with hard, heavy durable timber, the bark has astringent and tonic properties. A fragrant nectar can be distilled from the flowers. A cape, projection
Tanju: a platform
Tanka asi: a tripod for cooking rice
Tarum: indigo, *Indigofera tinctoria* (pp. 19, 20, 87)
Taya: cotton when growing; to clear away stumps
Tayok: to strike a person with the open hand, strike (of a flint and steel)
Tayok gasing: a hooked piece of wood for winding thread upon from the spinning wheel; the curves a top makes when spinning
Tebok: a hole, notch
Tekalong: a species of bread-fruit tree the bark of which is used for making *sirat*, *kalambi*, and *pua* (pp. 4, 69)
Teku, teko: curved; a kind of earring
Telu, telo: an egg (Malay, *telor*)
Tengang: a long and straight creeper, the bark makes durable cords; it is cultivated
Tenggak: a necklace
Tengiling, tengilang: the scaly anteater, *Manis javanica*
Tenjak: a treadle loom with a rigid framework; the type used by the Malays
Tenyalang: hornbill, *Buceros rhinoceros*
Tetak, betetak: to cut; *siritak nadai tampong*, cut off with nothing to follow
Tiang: a post, pole, mast
Tiga: three
Tikai burik: a seat-mat
Tikal: fold up, tie, turn back
Tikup: to close, shut
Tindok: sleeping, asleep, to sleep
Tinggang: to fall upon, press
Tisik: scales of a fish or animal
Trabai, terabai: a shield
Trong: the egg-plant, *Solanum* sp.
Truju, trugu: push with violence
Tu: this, these
Tuboh: the body, people, a person
Tubu: edible bamboo shoot (pl. XVIII)
Tugang: a decoration of various colours or coloured stripes
Tukal: a wooden frame about three feet long upon which cotton thread is strung ready for weaving (Malay, a skein)
Tulang: a bone
Tumpoh: the ordinary Iban loom (p. 11)
Tungku: the supports of a cooking-pot; *tungku asi*, tripod for cooking rice
Tunjing: a hoof
Tusu: the breast, udder, milk
Tutup: a lid, cover
Tutup long: the cover of a Kayan bark basket

Ubi: a yam, *Dioscorea*
Ubiara: the wild potato used as a dye
Ubong: cotton thread
Udah: finish, end

Udam: a species of fresh-water fish
Ujan: rain
Ujuh: a feather or anything put in the headkerchief or hat as an ornament
Ujung: end, point
Ular, urar: a snake
Ulat: a grub, maggot, caterpillar
Ulu: a handle (of a sword, etc.); head waters of a stream, up river
Unak: a thorn

Ungki: edge of a pattern
Unghui: the red or black trimming to the collar of a jacket
Upeh: the spathe of palm blossoms
Upong: the spathe of palm blossoms, flower or fruit stalk
Urat: a root

Wi: the rattan, *Calamus* sp., see ratan and sega

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PLATES
I-XXXV

[p. 159]
[pp. 158 + 160 are blank]

Plate 1

X 531

ANTHROPOMORPHS

a, *Ali Ungkok*: "Grandfather Ungkok, who lives in the moon". 35.854 (13).
b, *f*, *h*, *Engkaramba*. *b*, 35.923 (9); *f*, 35.924 (36, 38); *h*, 35.926 (2).
c, *Engkaramba*. 35.923 (17); perhaps an *engkaramba engkatak*, frog figure.
d, *g*, *Bukang engkaramba*: headless *engkaramba*. *d*, 35.924 (14, 15); *g*, 35.924 (46).
e, *Anak engkaramba*: young *engkaramba*. 35.924 (22, 23).
i, *Engkaramba besugu*: "a female figure with a comb in the hair". 35.926 (7).
j, *Bulan menyembang*. 35.921 (7).

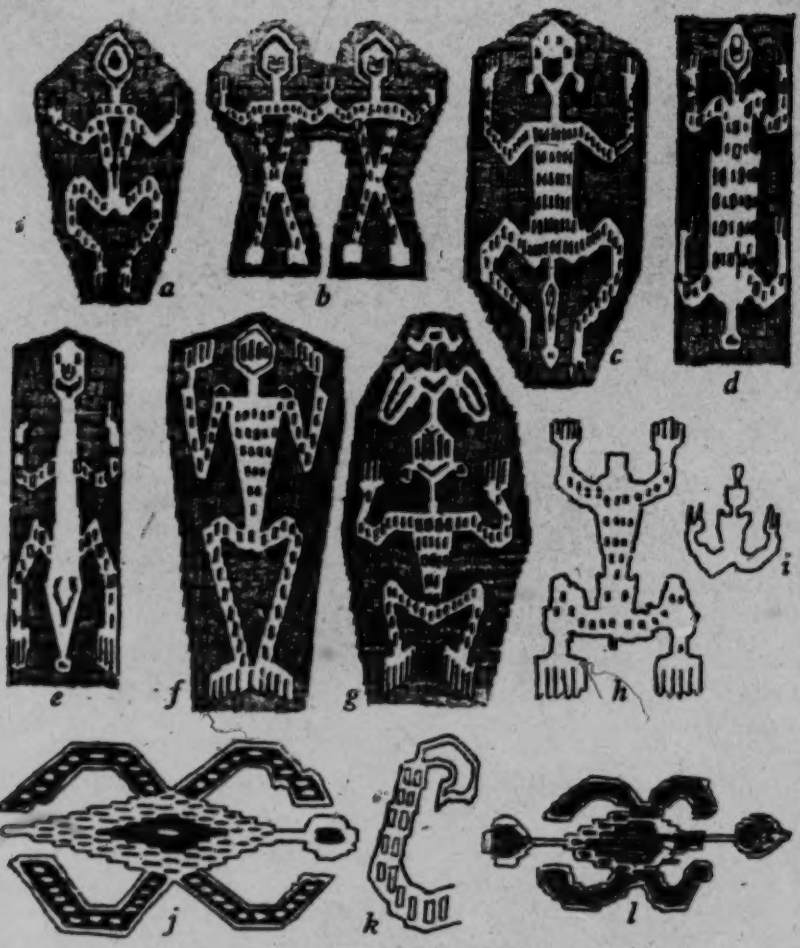
[Many of the drawings on pls. I–XXV were made from the opposite side of the cloth than that to which the labels are attached, so in these cases the design appears reversed when looking at the labelled side.

The numbers in brackets indicate the numbered patterns on the cloths. A complete list of the numbered and named patterns is entered in a book in the Museum. A star after a number in brackets denotes that the identification was made by us. The translations in quotes are taken from labels.]

[end plate 1]

Plate II

X 531



ANTHROPOMORPHS

a–g, Human figures (*Pengkarumba*). *a*, 35.931 (1°); *b*, 35.931 (2°); *c*, 35.930 (1°); *d*, 35.930 (2°); *e*, 35.930 (3°); *f*. 35.929 (1°); *g*, 35.929 (5°).

h, *Bukang*: a headless corpse. 35.929 (3°).

i, *Guri enk* (*engku*): my clothes. 35.924 (7).

j, *l*, *Selam*: "diving pattern". *j*, 35.882 (1°); *l*, Sarawak Museum, *pua*, No. 251 (Camb. Museum photo. Indo. Born. 365).

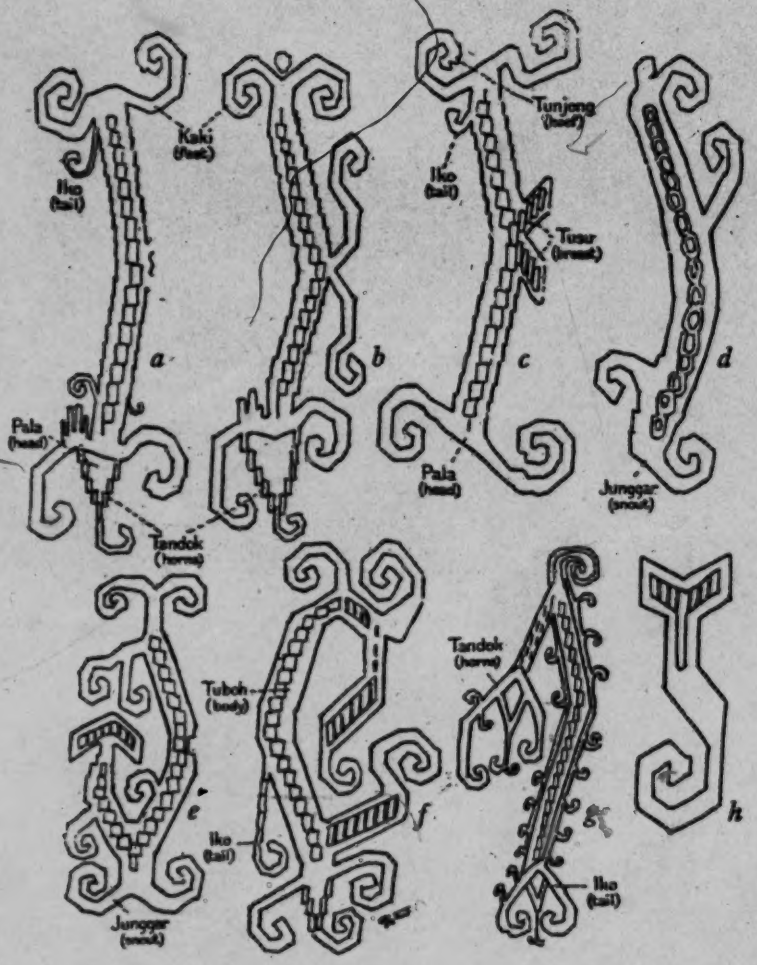
k, *Betayak*: "calling attention with the hand, to beckon" ("to strike with the open hand", *S.D.D.*). 35.859 (8).

[end plate 2]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate III

531 X



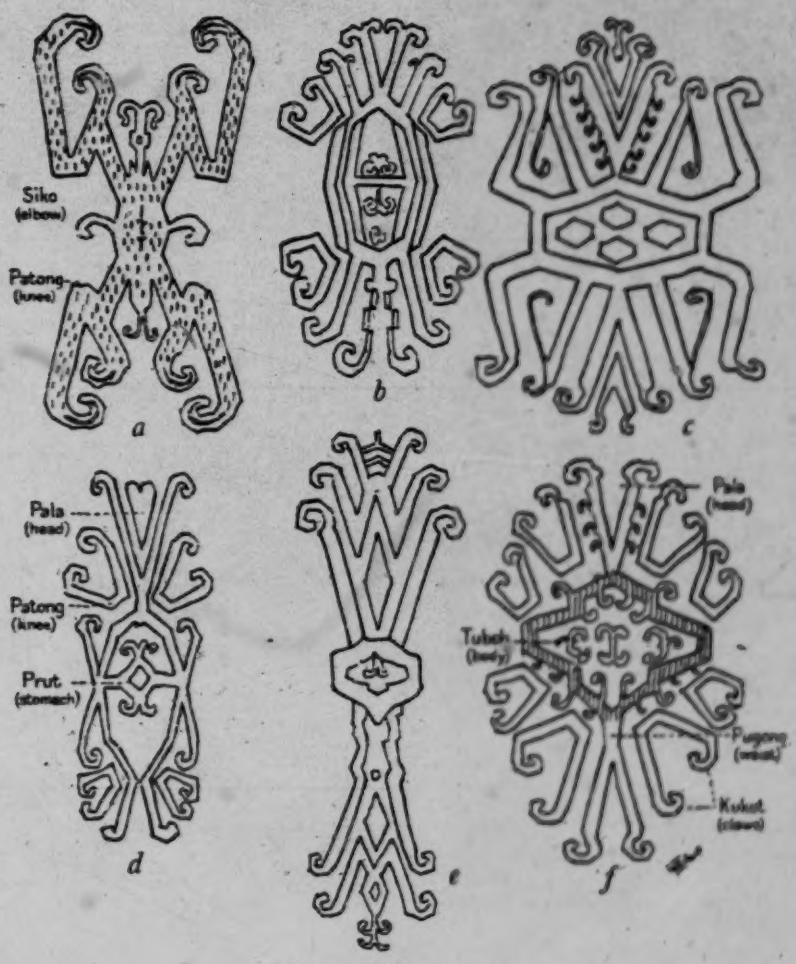
DEER

a, *b*, *Rusa*: "deer". *a*, 35.854 (44); *b*, 35.854 (45, 51).
c, *d*, *Rusa inda*: hind. *c*, 35.878 (11, 13); *d*, 35.870 (15).
e–g, Deer curled up. *e*, 35.870 (25, 29); *f*, 35.878 (17, 27, 29); *g*, 35.863 (31, 34, 38, 42).
h, *Anak rusa*: young deer. 35.878 (2, ?9).
d and *e*, *junggur* (snout) should be *junggur*.

[end plate 3]

Plate IV

X531



TIGER-CATS

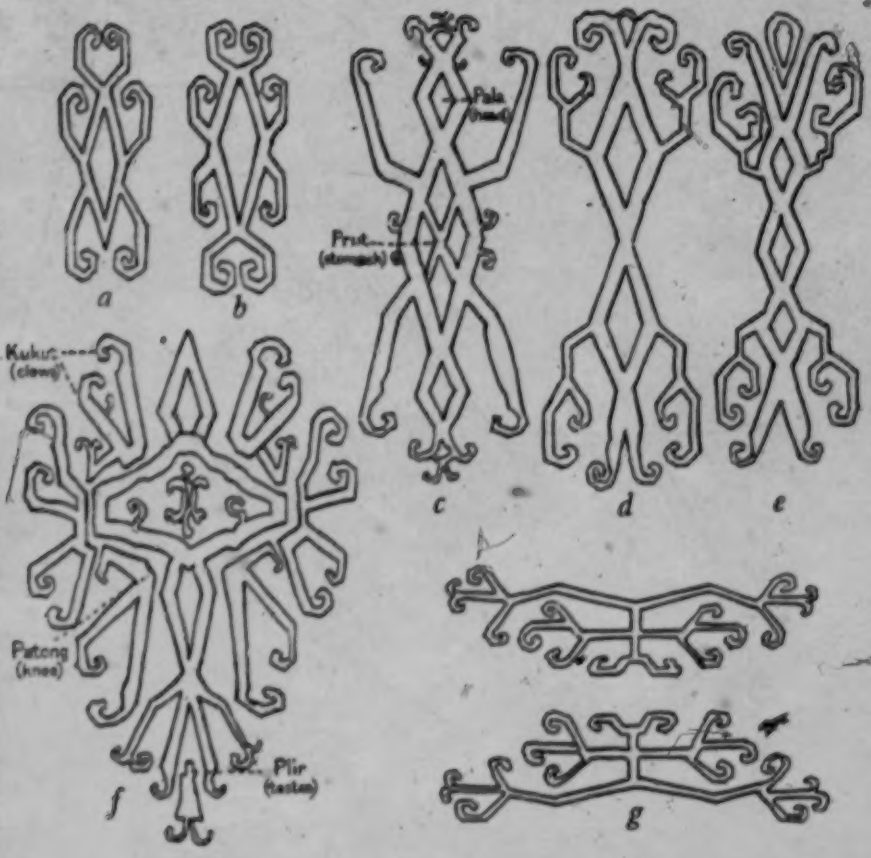
a, *Remaung*: "tiger". 35.862 (3, 6).

b–f, *Remaung*: "tiger-cat" (*Felis nebulosa*). *b*, 35.868 (12, 16, 21); *c*, 35.866 (45, 46, 48, 53); *d*, 35.868 (2, 5); *e*, 35.859 (11, 13, 14, 17, 20, 21); the head is towards the foot of the page; *f*, 35.873 (4, 7, 13); *pusong* (waist) should be *pusung*.

[end plate 4]

Plate V

531



SHREWS

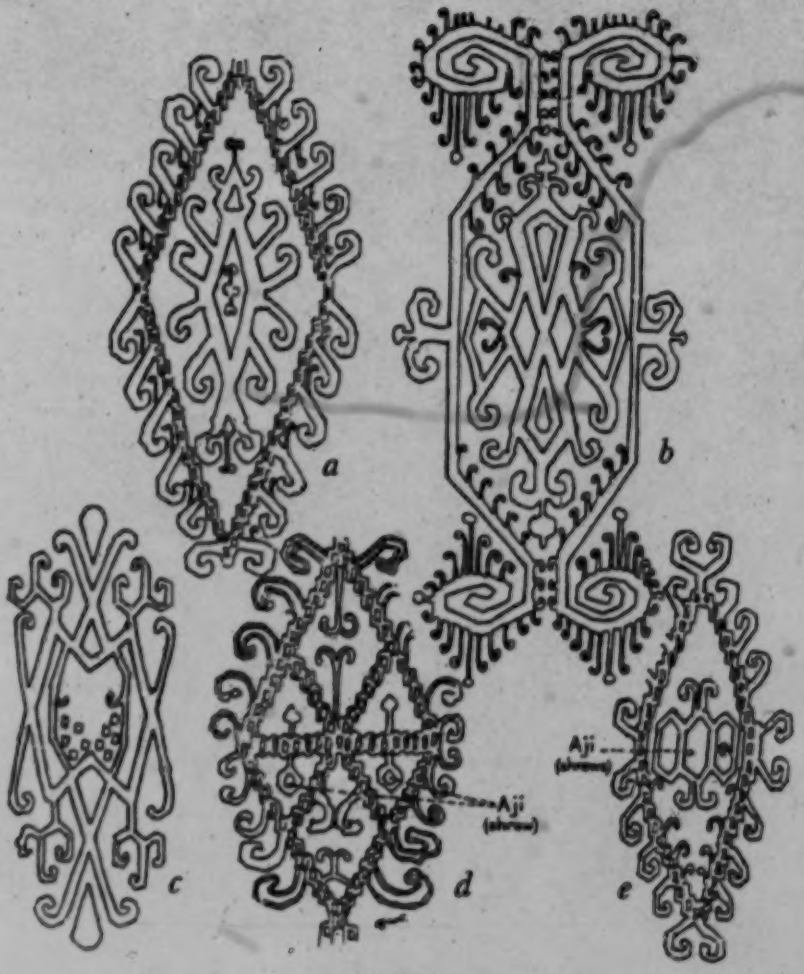
a, *Anak aji*: young shrew. 35.877 (19).

b–f, *Aji*: "shrew". *b*, 35.865 (18); *c*, 35.866 (27, 32, 38); *d*, 35.895 (1♂); *e*, 35.894 (1♂); *f*, 35.862 (25, 28, 38); this is labelled "*aji bulan*".

g, *Aji beradap*: "shrews face to face". 35.865 (17).

[end plate 5]

X531 Plate VI



SHREWS

a, *d* *e*, *Aji bulan buah bangkit*: white shrew on a *bangkit* fruit. *a*, 35.862 (29); *d*, 35.855 (39); *e*, 35.865 (2, 4) see pl. XXIX. The lozenge outside the *aji* is the fruit, *buah*, of the *bangkit*, the stepped outline is labelled "*nbok tangga panok*, pole-ladder with notched steps, *panok* means to peck as a fowl", the scrolls outside are *jerit nyangking*, "a pattern of itself".

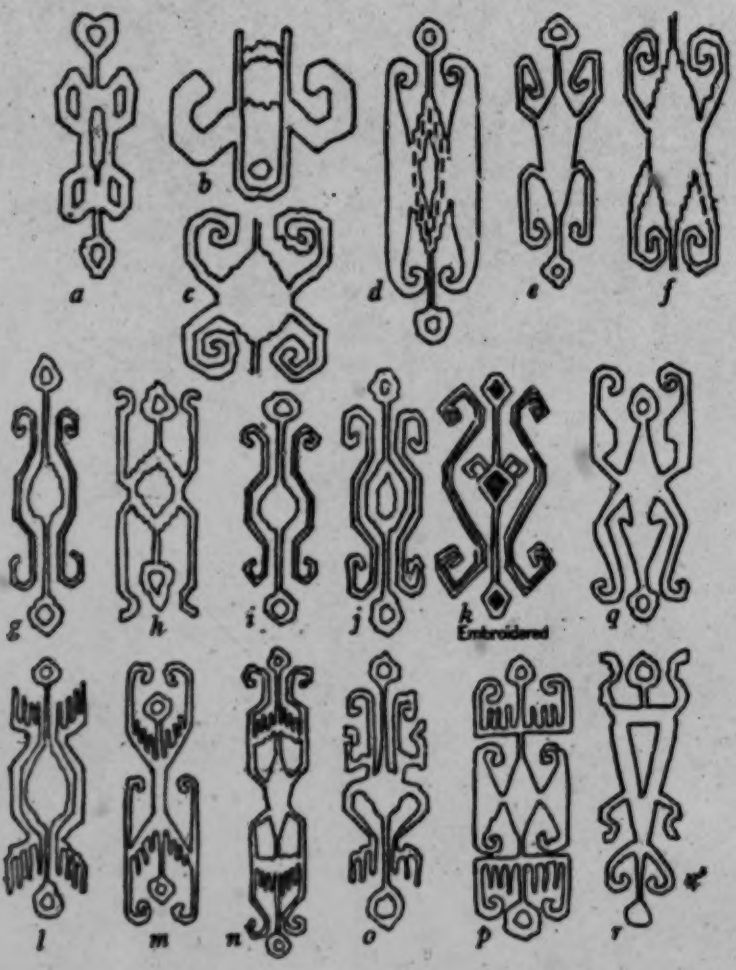
b, *Aji pelangka*: shrew in a "husking box (*plangka*)". 35.873 (17) and pl. XXX, A.

c, Shrew with white spots (rice grains?) in its stomach. 35.865 (6, 7, 8, 11, 14), see pl. XXIX.

[end plate 6]

Plate VII

531 X



BIRDS

a–d, Burung: "bird". *a*, 35.854 (35); *b*, 35.870 (19); *c*, 35.928 (46); *d*, 35.862 (20).

e, Burung burak prut: "bird with white breast". 35.860 (31).

f, Burung burak: a white bird. 35.924 (3).

g, h, Burung tawang prut: "bird with opening in breast". *g*, 35.907 (7); *h*, 35.860 (26).

i–k, Burung keburung: covered or concealed bird. *i*, 35.904 (31); *j*, 35.905 (5); *k*, 35.906 (13).

l–p, Burung berugo: "bird with comb". *l*, 35.926 (4); *m*, 35.856 (17); *n*, 35.860 (27); *o*, 35.872 (5); *p*, 35.908 (54).

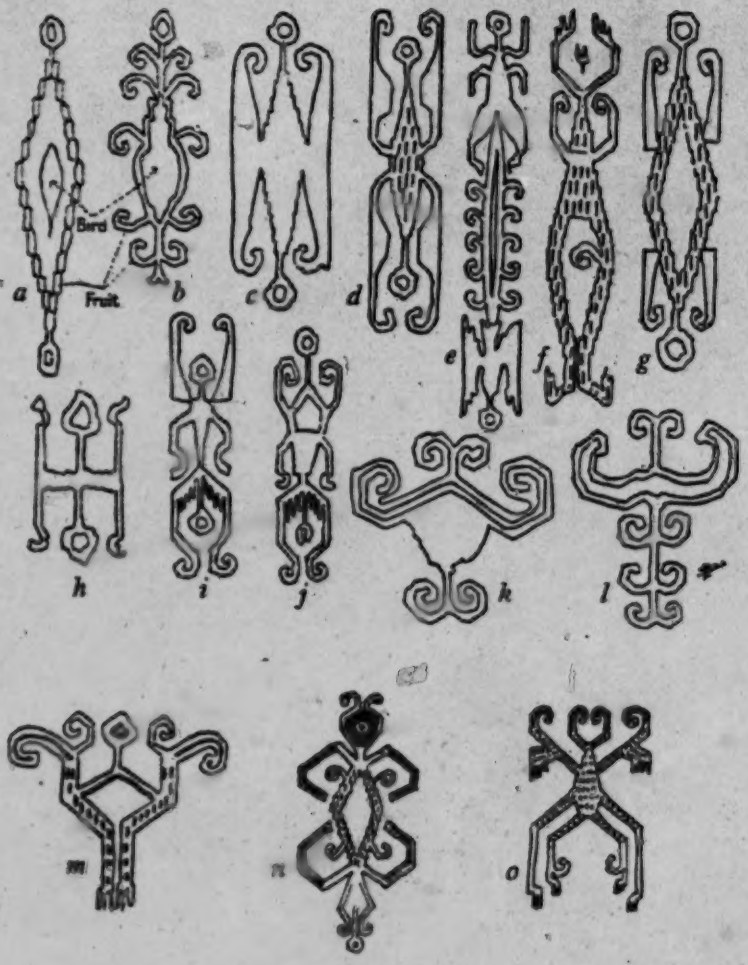
q, r, Burung enarpa: bird with outstretched wings. *q*, 35.908 (47); *r*, 35.908 (43, 44).

[end plate 7]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate VIII

X 531



BIRDS IN ACTION

a–d, Burung buah bangkit: "bird with the *bangkit* fruit". *a*, 35.903 (18); *b*, 35.855 (2); *c*, 35.908 (45); *d*, 35.856 (15).

e–g, Burung jrughuam: bird and the netting needle or spool. *e*, 35.858 (8); *f*, 35.856 (16); *g*, 35.923 (14).

h–j, Burung kedayong: "bird rowing". *h*, 35.860 (22); *i*, 35.926 (1); *j*, 35.856 (15).

k, l, Burung berayak: "bird with wings extended". *k*, 35.922 (30); *l*, 35.859 (1, 4).

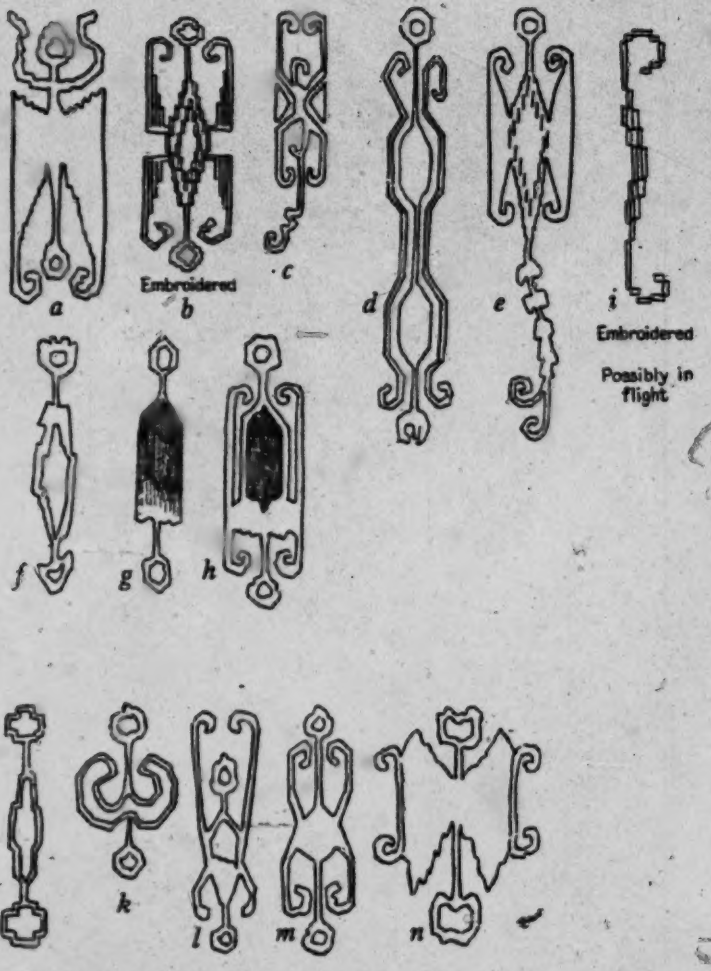
m, n, Gajai burung: *gajai*-bird. *m*, 35.920 (27); *n*, 35.920 (5–8).

o, ensilang gajai. 35.920 (16, 17, 19).

End plate 8

Plate IX

531/X



a b c d e i f g h

j k l m n

SPECIAL BIRDS AND YOUNG BIRDS

a–c, *Burung lelayang*: "swallow". *a*, 35.928 (49); *b*, 35.904 (30); *c*, 35.872 (26).

d, *Burung belampang*: a ceremonial bird. 35.907 (3).

e, *Burung belingkiau*: argus pheasant? 35.908 (39, 40).

f, *Burung andin*: a fabulous bird? 35.923 (16).

g, Perhaps a variant of the next one on the same cloth.

h, *Burung enchiyok* (*tinggang ujan*). We cannot find a translation for *enchiyok*; the following words are "falling rain". 35.905 (21).

i, *Burung jagi*. 35.904 (40).

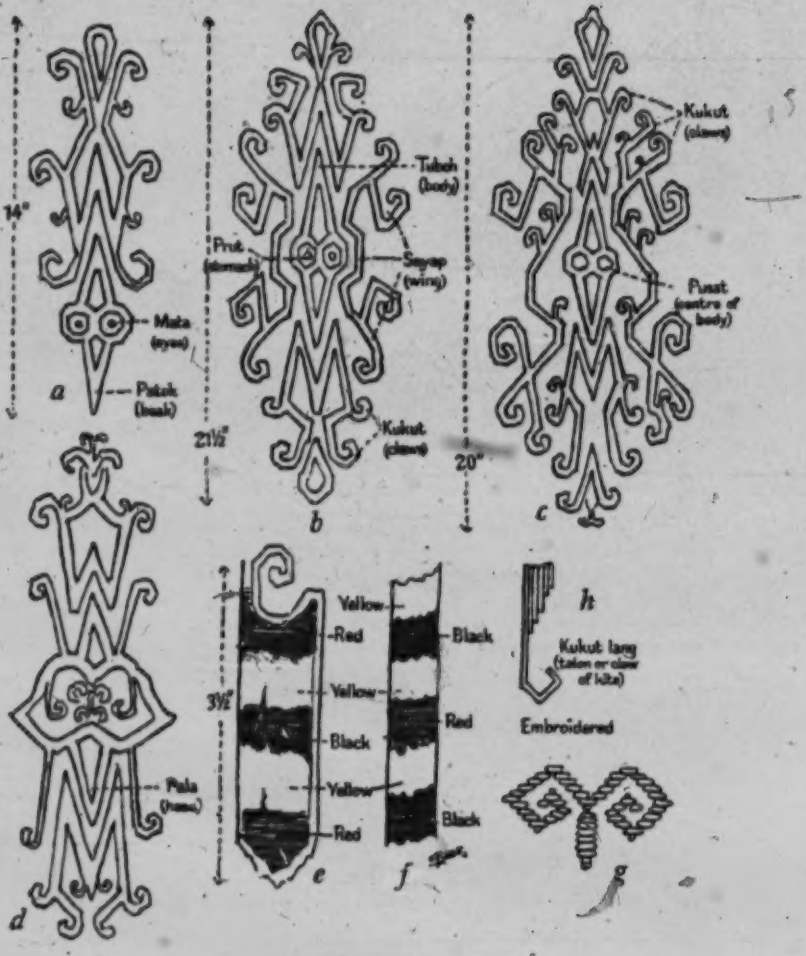
j–m, *Anak burung*: "young bird". *j*, 35.904 (43); *k*, 35.881 (7); *l*, 35.856 (11); *m*, 35.873 (3).

n, *Anak burung*: "young bird" (the large wings indicate a swallow). 35.870 (7).

End plate 9

Plate X

X 531



KITES

a–d, *Lang*: "hawk", the kite. *a*, 35.881 (15, 17, 19, 20); *b*, 35.881 (22, 26, 28, 30, 33, 34); *c*, 35.877 (2, 4, 5, 7, 10, 11); *d*, 35.857 (7, 9, 11).

e, *f*, *Kengkang bulu lang*: striped feather of kite (*Singalang Burung*). *e*, 35.924 (17); *f*, 35.922 (22, 23).

g, *Kukut burung*: "bird's claw". 35.915 (5).

h, *Kukut lang*: talon of kite. 35.904 (33).

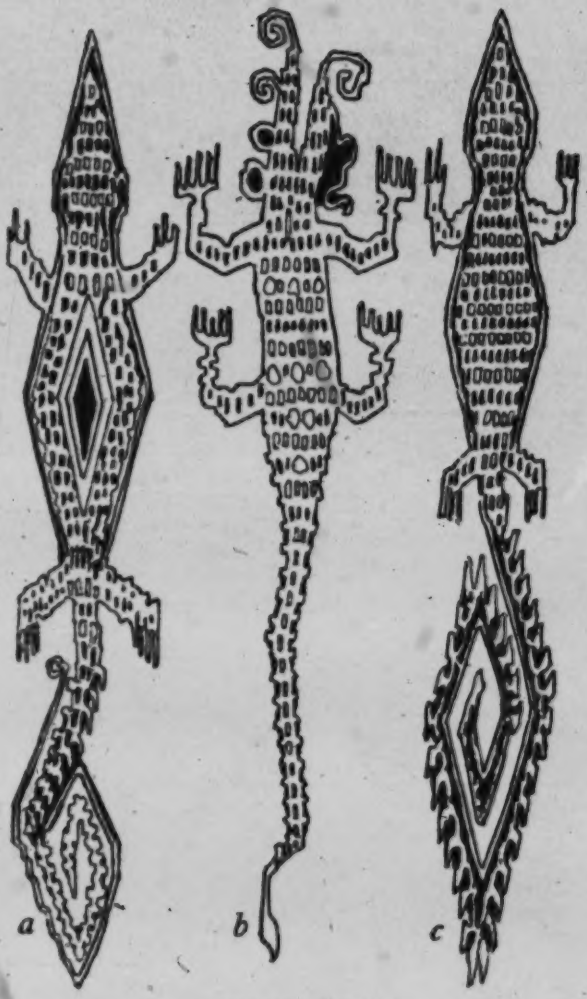
a, *b*, *c* have their heads towards the foot of the page. The eyes and beak of *a* are so labelled, but in *c* this lozenge-shaped device is the centre of the kite's body, and in the cloth there is, as in *c*, a continuation of the pattern which is not drawn.

Send plate 10

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XI

531 X



CROCODILES

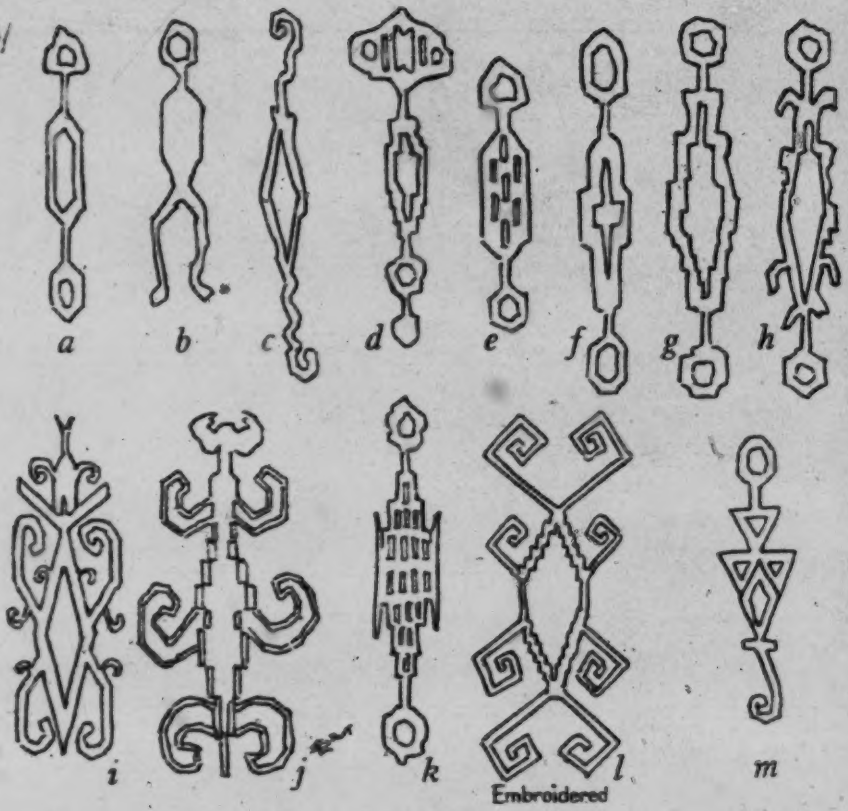
a–c, *Baya* or *baia*: "crocodile". *a*, 35-931 (3°); *b*, 35-929 (4); *c*, 35-931 (4°).

[and plate II]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XII

X 531



LIZARDS

b–e, Anak lachau: young grass lizard. *b*, 35.858 (6); *c*, 35.923 (12); *d*, 35.922 (45); *e*, 35.908 (12, 13, 14).

a, f–h, Lachau: "green grass lizard". *a*, 35.906 (10); *f*, 35.903 (3), fig. 13 *g*; *g*, 35.922 (27); *h*, 35.924 (12).

i, j, Engkarung: lizard (skink). *i*, 35.880 (4, 5, 8, 9); *j*, 35.861 (6, 7, 8).

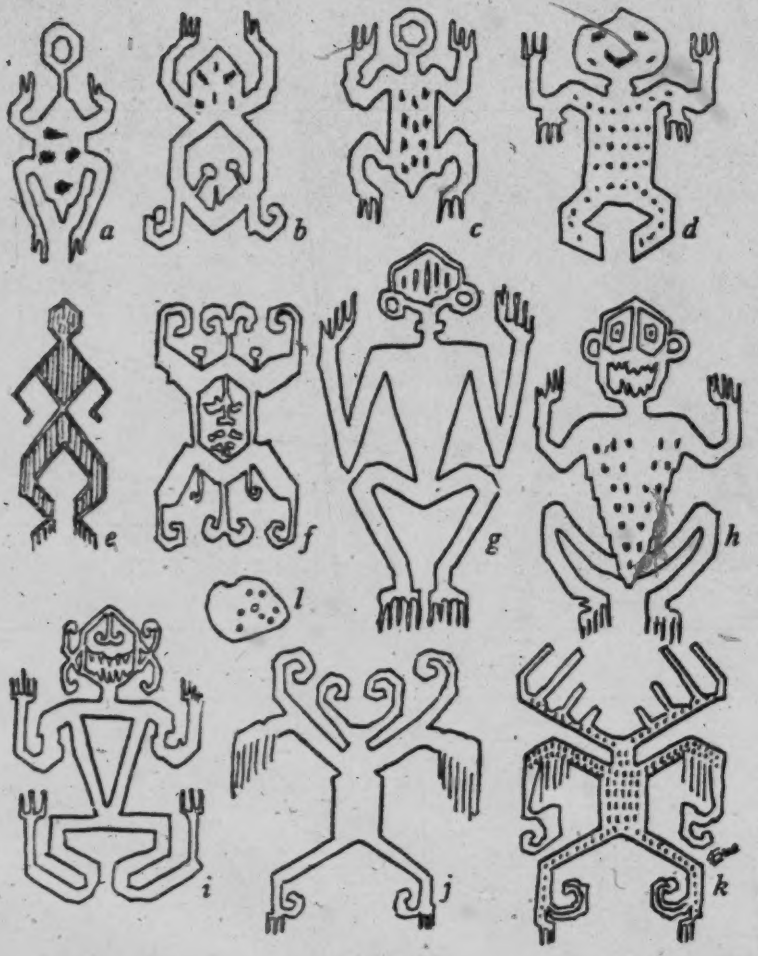
k, Engkarung kejong: A stiff skink lizard. 35.871 (1, 8).

l, Biyak: monitor lizard (*Varanus* sp.). 35.918 (1).

m, Engkarung tisik: lizard with scales. On a *bidang* drawn by Haddon at Baram.

[end plate 12]

Plate XIII



FROGS

a–d, *Engkatak*: "frog". *a*, 35.923 (4), labelled ***anak engkatak***; *b*, 35.924 (42); *c*, 35.924 (23), labelled ***anak engkaramba***; *d*, 35.908 (16); *e*, 35.906 (8).

f, ***Pama***: a species of frog. 35.868 (13).

g, Although this is labelled ***pama***, we think this is an ***engkaramba engkatak***. 35.929 (2).

h, ***Engkaramba engkatak***: frog figure. 35.926 (9).

i, ***Engkaramba gajai***: ***gajai*** figure. 35.926 (13).

j, ***Gajai***. 35.92[illegible](16); these figures are spotted.

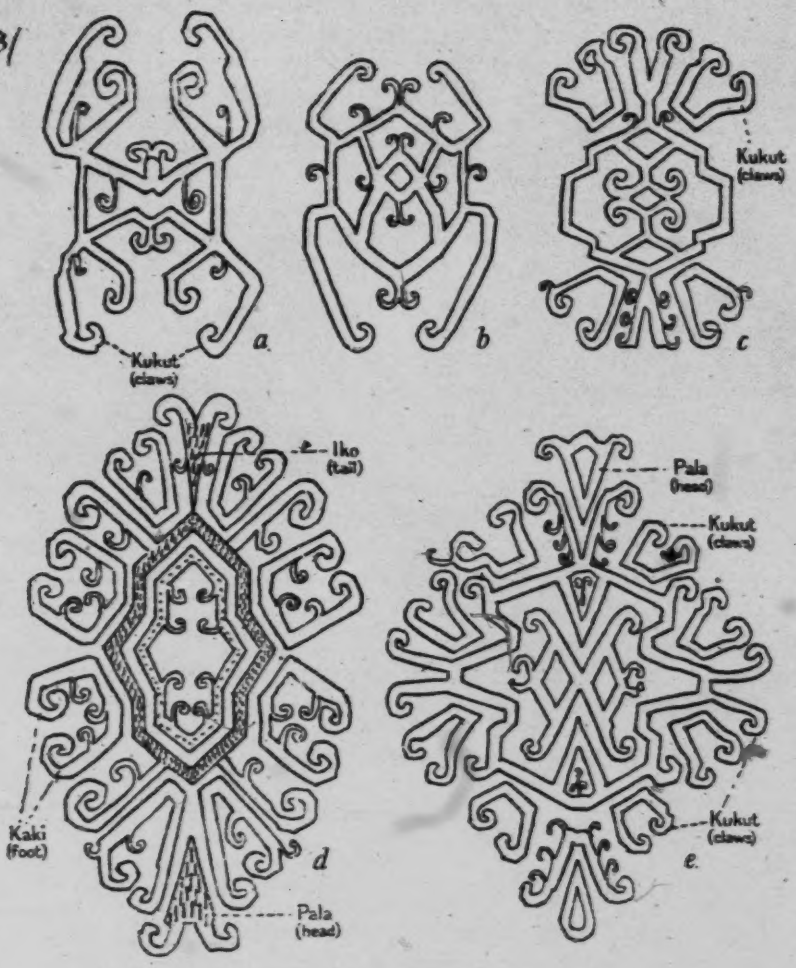
k, ***Entilang gajai***. 35.920 (4).

l, ***Telu gajai***: egg of ***gajai***, it looks like frog spawn. 35.920 (18).

[end plate 13]

Plate XIV

X 531



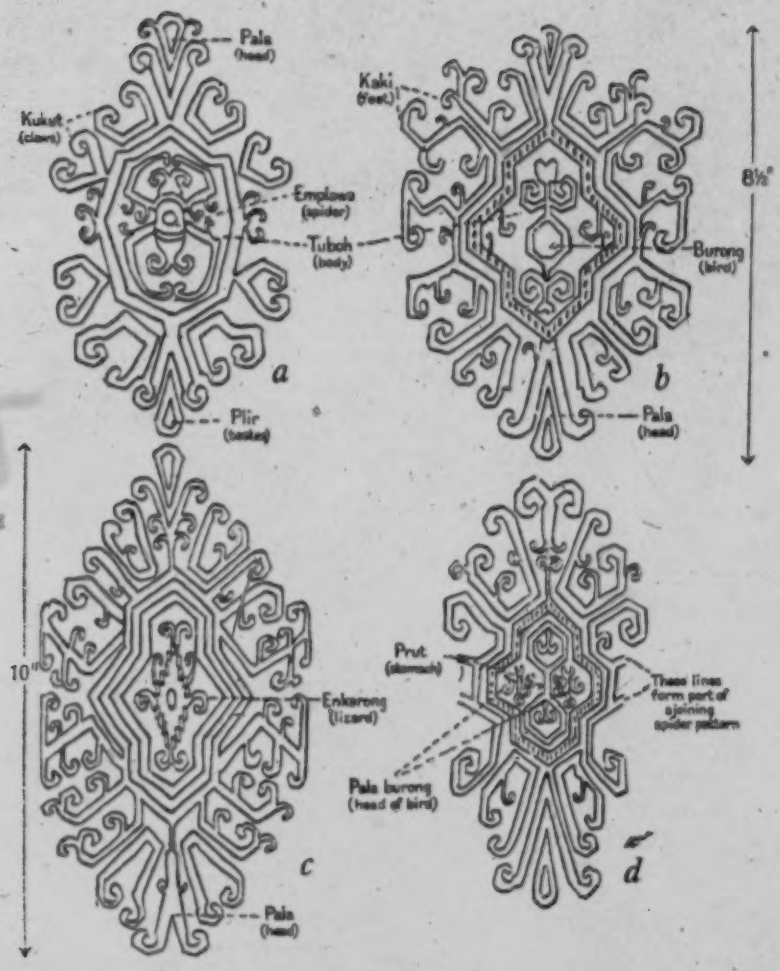
SPIDERS

a, *b*, *Anak empelawa*: "young spider". *a*, 35.862 (43); *b*, 35.857 (19*).
c, *d*, *e*, *Empelawa*: "spider". *c*, 35.862 (42); *d*, 35.857 (14); *e*, 35.866 (13, 15, 24).

end plate 14

Plate XV

531X



SPIDERS

a. Spider with another spider on it. 35.866 (21, 25, 31).

b, *d*, *Burong di tengah tuboh emplawa*: "a bird in the body of a spider". *b*, 35.857 (4); *d*, 35.879 (14, 16, 17, 18, 20, 21); the marks in the outline of the stomach, *prut*, are labelled "*tubok igi bras*, rice grains".

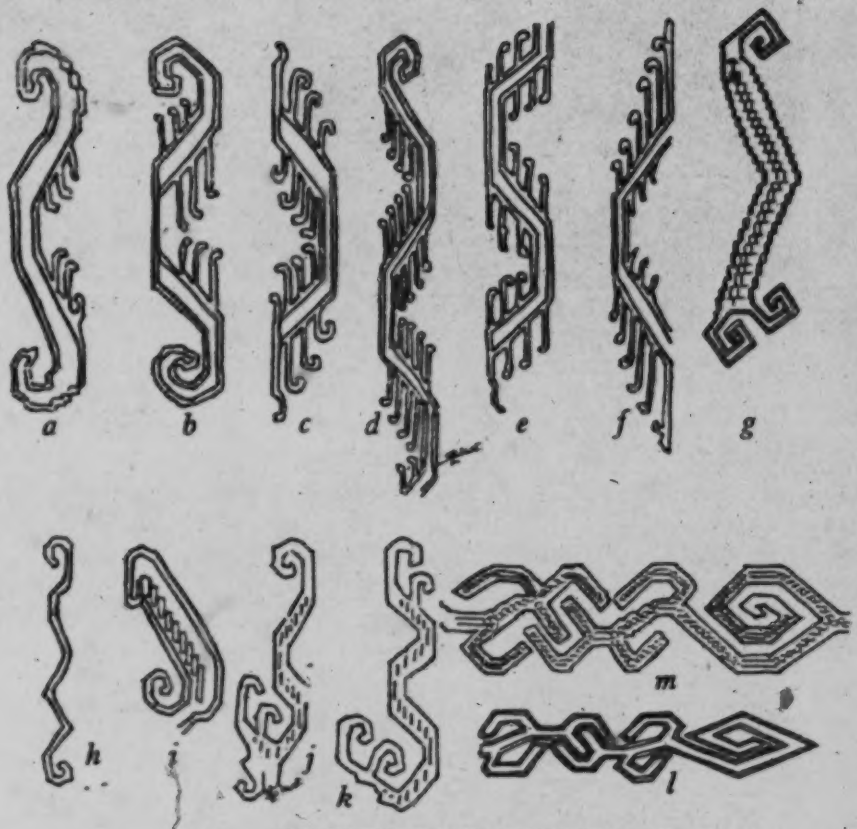
c, *Engkarong empakap di tuboh emplawa*: "the grass lizard on the body of the spider". 35.857 (29). *c*, *enkarong* (lizard) should be *engkarong*.

[end plate 15]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XVI

X 531

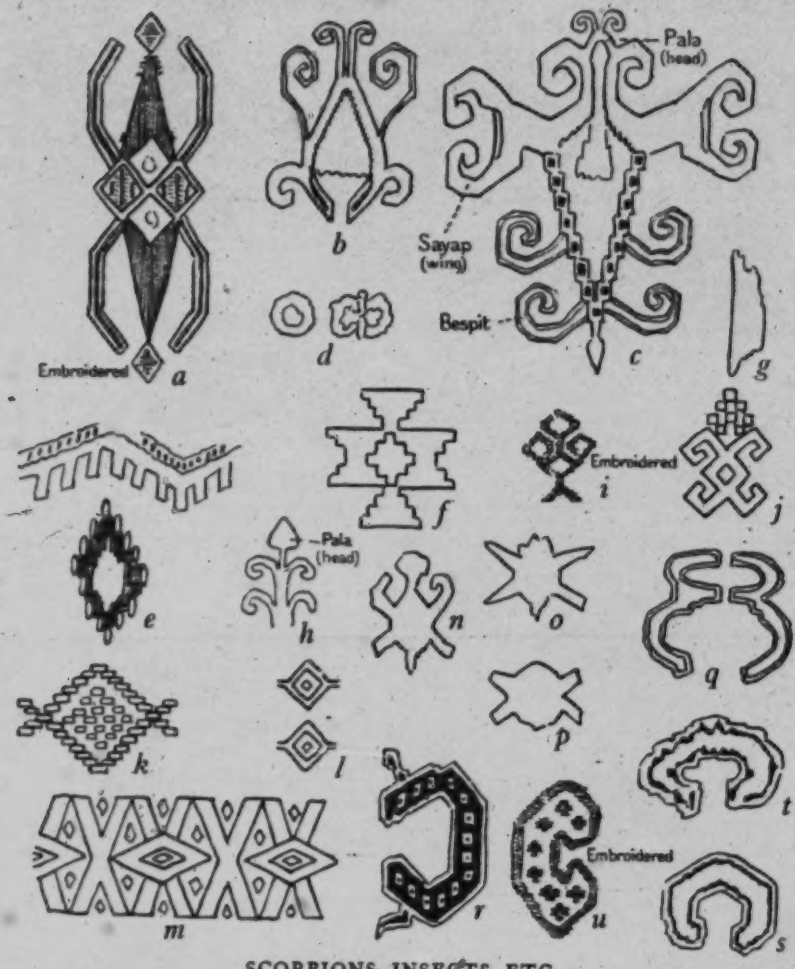


CENTIPEDES AND LEECHES

a, *Anak embeyar*: young centipede. 35.856 (2).
b–d, *Embeyar*: "centipede". *b*, 35.868 (3); *c*, 35.872 (12); *d*, 35.881 (6, *ngelepan* 10).
e, *Embeyar semerai sungai*: "centipede crossing a river". 35.857 (31).
f, *Kaki embeyar*: feet of centipede. 35.856 (7).
g, *Nemaier*: "centipede" (from embroidered cloth). 35.918 (6).
h, *i*, *Lintah*: "leech". *h*, 35.906 (14); *i*, 35.860 (14).
j, *Rendan lintah*: leech on a creeping plant. 35.877 (23, 24, 26).
k, *Bunga lintah*: "flower of the leech". 35.881 (8, 14).
l, *m*, *Lintah betegun*: "leeches swallowing" (one another). *l*, Sarawak Museum. Saribas *bideng* No. 219: Camb. Mus. photo. Indo. Born. 330 A; *m*, 35.886 (Pl. xxxi, 2).

[end plate 16]

Plate XVII

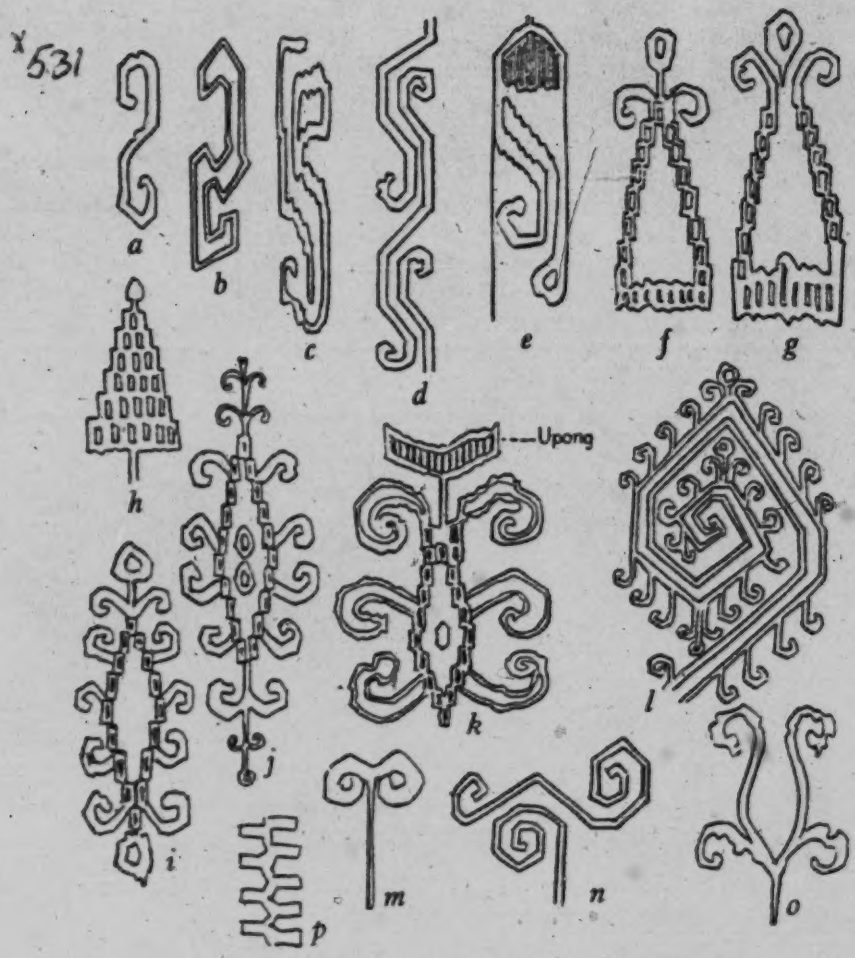


SCORPIONS, INSECTS, ETC.

a, *Kala*: "scorpion". 35.906 (12).
b, *Spit kala*: scorpion's nippers. 35.872 (21).
c, *Bayak*: "beetle" ("*bayak*, a species of moth", *S.D.D.*). 35.928 (11, 12, 14).
d, *Pantak penandok*: the wound caused by the sting of a wasp? It might even represent the clay nest of a wasp (see p. 132). 35.865 (4).
e, *Pantak penandok iku ruai*: *iku*, tail; *ruai*, argus pheasant, or the verandah of an Iban house (see p. 132). 35.924 (4).
f, *Pantak lelambak*: wasp and flower pattern. 35.903 (16); cf. fig. 14.
g, *Empetut*: "grub". 35.881 (9, 11).
h–j, *Pala buntak*: "head of a grasshopper". *h*, 35.855 (10, 14); *i*, 35.913 (4); *j*, drawn by Haddon from a *sirat* at Marudi.
k, *l*, *m*, *Mata puna*: eye of green pigeon. *k*, 35.912 (10, 12, 15); *l*, a *pua* border pattern, Kuching, Camb. Mus. photo. Indo. Born. 415; *m*, from the badge of a Saribas Iban *kalambi* at Limbang, Camb. Mus. photo. Indo. Born. 403, a similar pattern covers *bideng* 35.883.
n–p, *Anak ketam*: "young crab". *n*, 35.928 (25); *o*, 35.928 (39); *p*, 35.922 (15, 16).
q, *Spit grama*: "crab's nippers". 35.855 (30).
r–u, *Mayau tindok*: "sleeping cat". *r*, 35.927 (17); *s*, 35.927 (13); *t*, 35.927 (15); *u*, 35.913 (5).

[end plate 17]

Plate XVIII



MAST, BAMBOO SHOOTS, FRUITS, AND FERNS

a–e, Empili: mast ("acorns"). *a*, 35.854 (32); *b*, 35.868 (9); *c*, 35.867 (7); *d*, 35.860 (6, 8); *e*, 35.856 (9).

f–h, Pemuchok tubu: "bamboo shoots". *f*, 35.921 (2); *g*, 35.905 (6); *h*, 35.928 (51).

i, Burung buah bangkit: bird and *bangkit* fruit. 35.928 (47).

j, Buah bangkit: fruit of the *bangkit*. 35.855 (5).

k, Buah bangkit bebunga: fruit and flower of the *bangkit*, hanging from *upong bunga*, flower stalk. 35.928 (19).

l, Upong buah beringin: "bunch of *beringin* fruit". 35.860 (2, 3, 4).

m–o, Gelong paku resam: "curled tops of the *resam* fern". *m*, 35.854 (5); *n*, 35.854 (74); *o*, 35.860 (5).

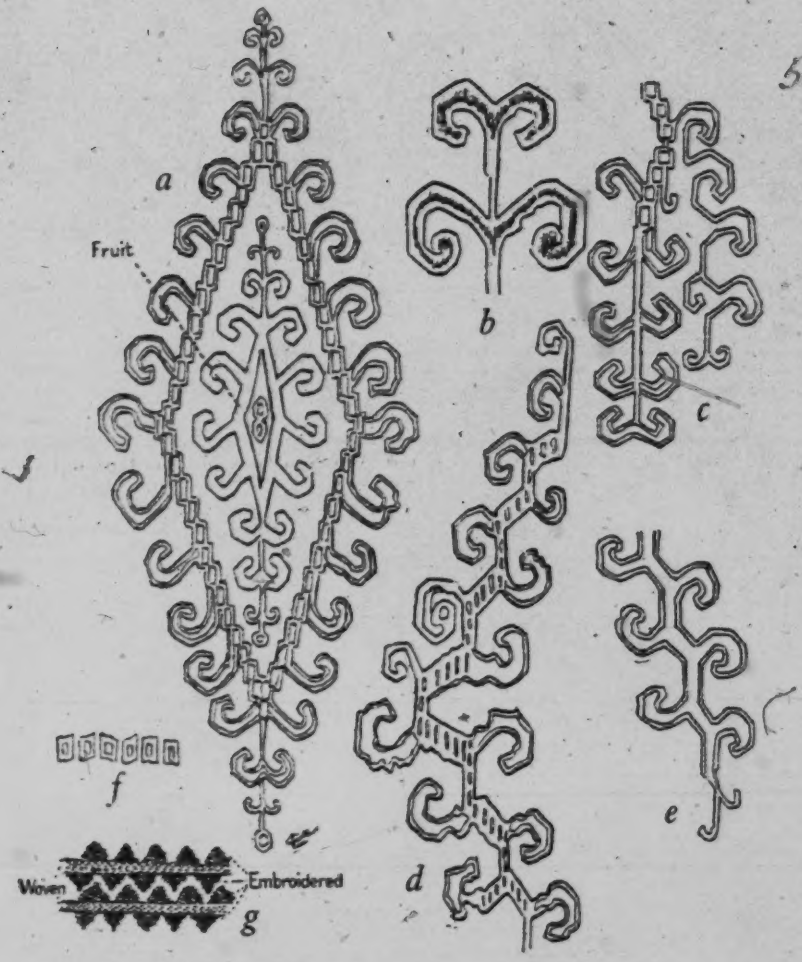
p, Daun resam: "leaf of the *resam*". 35.927 (5).

[end plate 18]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XIX

531 X



BLOSSOMS, GINGER ROOT, AND GOURD SEEDS

a, *Jerit tangkai bunga*: "blossoms [of the *bangkit*] completely covering the bunch" (*jerit*, many, in series"; *tangkai*, "stalk"); the fruit, *buah bangkit*, is in the centre. 35.855 (3, 5).

b, *Sanggul sesimpong*. "tendrils of a creeper which has been cut in two". 35.928 (2).

c, *Rundai bunga tangkong*: "dangling flower of a creeper". 35.855 (21).

d, *e*, *Bingka lia*: "ginger root". *d*, 35.863 (19); *e*, 35.869 (4) (labelled "*bingka liah bubul lapang*", ginger root to fill up a space).

f, *Tebok leka labu*: gourd seeds with holes. 35.875 (14).

g, *Dabong mayang*: serrated *mayang*, blossom of a palm. 35.913 (17, 18).

End plate 19

Plate XX

X 531

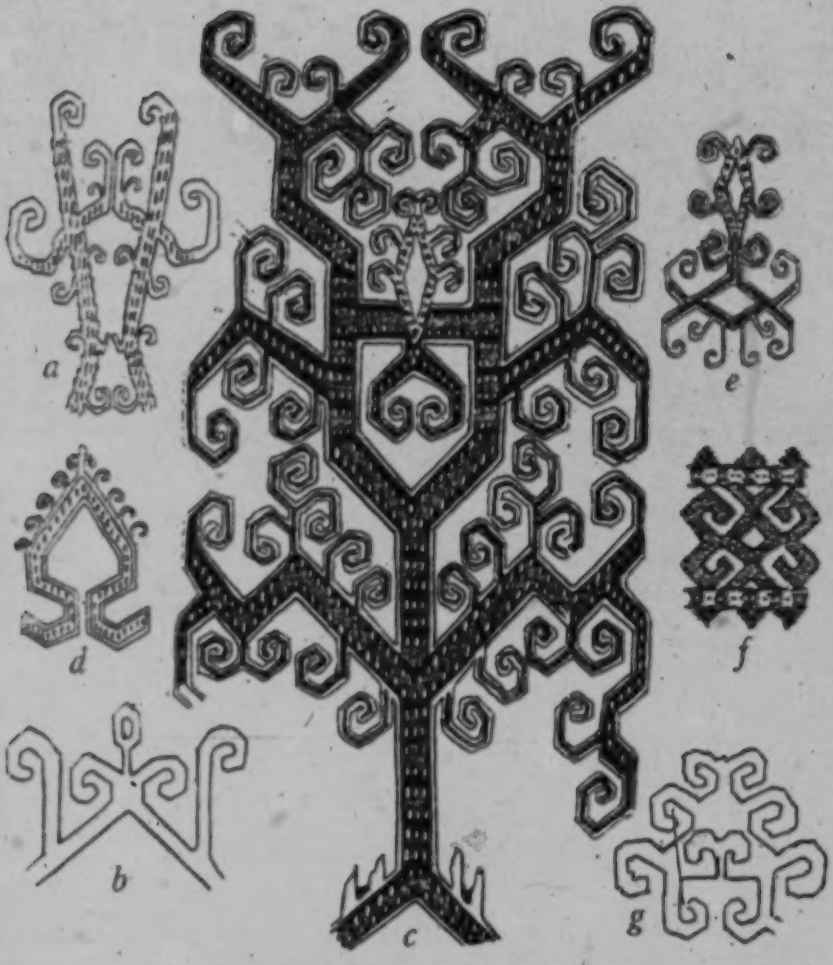
THE *TANGKONG*

Randau tangkong, "a creeping (climbing) jungle plant with scented pendant flowers".
a, *Randau tangkong bi penyuang*: "the lattice-work pattern of the *tangkong* creeper". 35.871 (6).
b, *Bunga tangkong*: "flowers of the *tangkong*". 35.863 (7).
c, *Tangkong mulai*: "a creeper which bends back from where it started". 35.855 (18).
d, *Daun tangkong mulai*: "leaf of the *tangkong* twisted back". 35.863 (24, 27).
e, *Upong bunga tangkong*: the spathe of the spadix (cluster of flowers) of the *tangkong*. 35.863

[end plate 20]

Plate XXI

531 X



BRANCHES, FIREFLIES ON A TREE, AND FRUIT

a, *Pating betulak*: "branches pushing one another back". 35.863 (6).

b, *Pating*: "branches". 35.870 (6).

c, *Batang sepepat* [*selimpepat*] *tebok igi bras*: tree with branches outlined by the light of fireflies, and holes with rice grains. 35,922 (14); *tangai sepepat*: "branch with fireflies" (12).

d, *Sanggul simpong*: at the top of the drawing are the tendrils, *sanggul*, of a creeper; at the bottom, "the creeper cut off", *simpong*; the marks on the creeper are called *igi bras*, "rice grains". 35.927 (2).

e, Flower and fruit of a *bungkit* tree. 35.028 (19, 20).

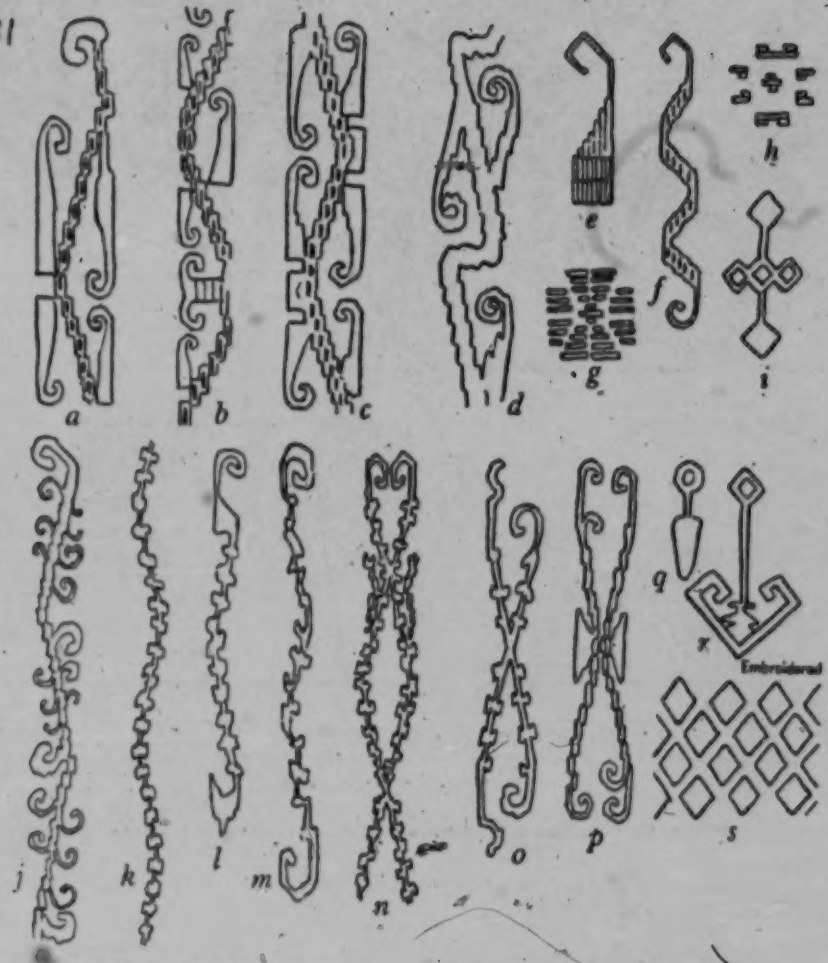
f, *Buah anyam*: woven or plaited fruit. 35.916 (3).

g, *Tanghong kayu*: "knob of wood". 35.881 (18).

[end plate 21]

Plate XXII

X531



ARENGA PALM, PUMPKIN, RATAN, THORNS, AND MANGO FRUIT

a–d, Entibep: "arenga palm". *a*, 35.862 (15); *b*, 35.860 (13); *c*, 35.856 (19); *d*, 35.868 (7).
e, Daun entibap: "leaf of the arenga palm". 35.904 (5).
f, Serak genok: "a gourd". 35.860 (20).
g. Bunga janggat: flower of a white pumpkin. 35.904 (91).
h, i, Lembak: a flower design plaited on mats. *h*, 35.906 (17); *i*, 35.918 (2).
j–n, Daun wi: "ratan leaves". *j*, 35.926 (6); *k*, 35.863 (12, 13); *l* (*unak wi*), 35.920 (22); *m*, 35.903 (7), see fig. 13 *d*; *n*, 35.921 (5).
o, Unak wi bekait: crossed thorny ratan. *o*, 35.856 (3).
p, Ruit gantai: barbed fish spear. 35.887 (1).
q, r, Buah angkong: fruit of a species of *Mangifera* (mango). *q*, 35.921 (6); *r*, 35.918 (4).
r, Buah kuras: "fruit of the horse mango (*Mangifera* sp.)". 35.918 (5).

end plate 22

Plate XXIII

OBJECTS IN DAILY USE

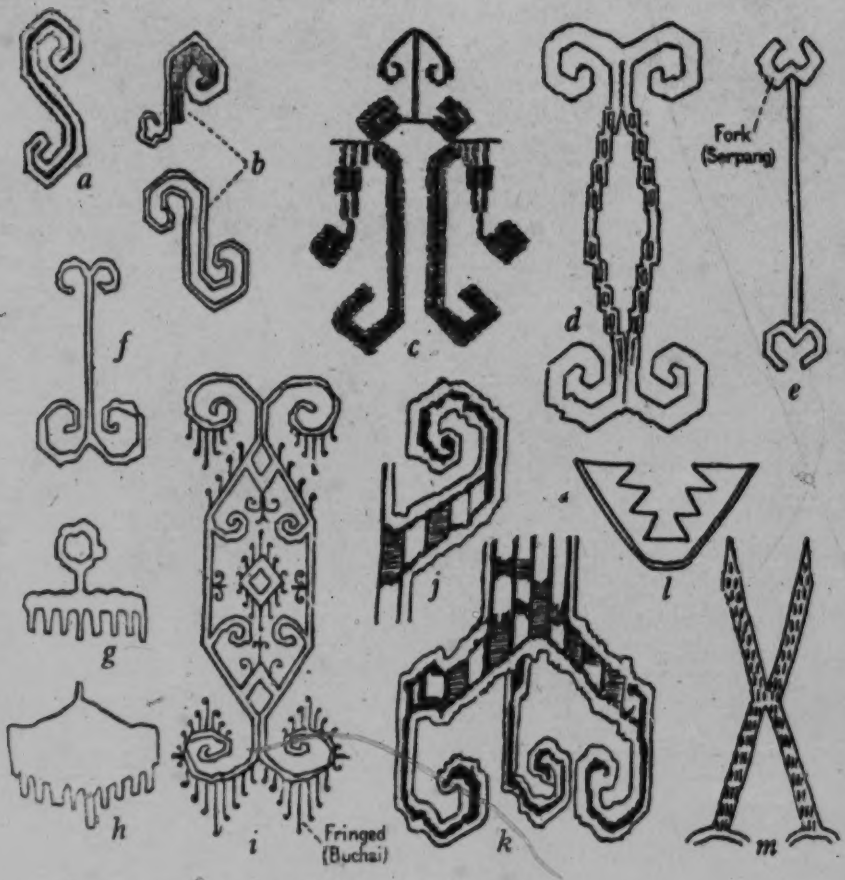
a, *Trabai bunghok*: shield. 35.870 (10).
b, *Gelong trabai*: "handle of shield". 35.871 (2, 3).
c, *Besampan*: canoe. 35.875 (9, 13).
d, *Sarong kris*: "*kris* sheath". 35.927 (7).
e, *f*, *Ladang*: "a farm, a division of land". *e*, 35.931 (5); *f*, 35.927 (6).
g, *Pempang lelingkok*: zigzag fence. 35.854 (4, 75).
h, *Entilang*: "framework of an Iban cooking-place". 35.855 (23–26).
i, *Spit api bekilak*: fire-tongs. 35.922 (17–19).
j, *Entilang dapur*: "fire-hearth". 35.928 (24).
k, *Baka entilang*: "fire-hearth without the earth for firing on". 35.928 (9, 10).
l–n, *Ulu tengayah*: "(crutch) handle of a paddle". *l*, 35.923 (6); *m*, 35.855 (31, 32, 42); *n*, "a complete paddle with extra scrolls", 35.855 (37).
o, *p*, *Kait*: hooks. *o*, *Gelong bekait*, "a hooked scroll or curve", 35.854 (16); *p*, *kait betulak*, "a hook pushing another back", 35.863 (3).
q, *Jongka rayit*: a curved barb. 35.880 (35).
r, *s*, *Pasak serpang*: "the wedge of the fork". *r*, 35.861 (31); *s*, 35.867 (8).
t, *Serpang bekait*: "hooked wedge" [*serpang*, a trident, fork]. 35.872 (3).
s, *Pasak*: "wedge". 35.865 (39).

end plate 23

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXIV

K 531



OBJECTS IN DAILY USE

a, *b*, *Tayok gasing*: a hooked piece of wood on which thread is wound from spinning wheel. *a*, 35.865 (40); *b*, 35.869 (39).

c, Part of spinning wheel with spindle. 35.918 (3); it is labelled "taio [*?teya*, cotton] *gasing*, thread driving the spinning wheel".

d, *Tekal jengkuan*: "frame for winding cotton", "a wooden frame about 3 ft. long upon which cotton thread is strung ready for weaving", *S.D.D.* 35.878 (1, 3, 4).

e, *Serpang jengkuan*: "the slit in the weaving needle"; a netting needle with forked ends or a spool with slit ends. 35.861 (22, 27).

f, *Tunku. asi*: "tripod for cooking rice". 35.870 (13, 14).

g, *h*, *Sugu*: "comb". *g*, 35.903 (10); *h*, 35.854 (30, 40).

i, *Entilang plangka*: "box for padi husking". 35.872 (14, 15, 16, 18, 20). No. 15 is labelled "*pelangka* (*manang besaut*)" which indicates a box without a lid; a *plangka* of this kind is used by a *manang*, medicine man, at the *taut* ceremony, which is performed when a person is ill (see p. 78).

j, *Ruyit*: barb of a fish spear. 35.924 (41).

k, *Sergang pala tangga beji*: bamboo fish trap, head, pole-ladder, —? 35.924 (43, 44).

l, *Dabong betangkal*: a serrated notch in an upright post for a cross-bar. 35.903 (14).

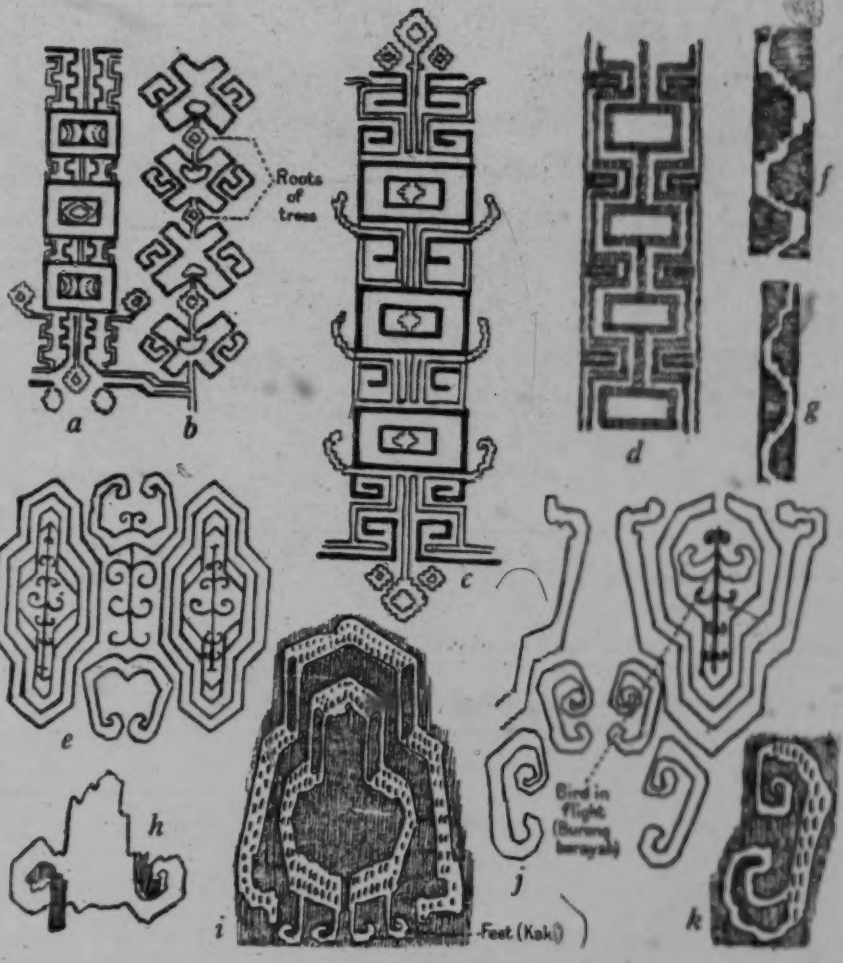
m, *Papan penuboh*: "the plank where the prop is tied". 35.855 (34).

[end plate 24]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXV

531



NATURAL PHENOMENA

a, c, Padong paya: a rocky ledge in swamp land. *a*, 35.913 (10, 12); *c*, 35.917 (8, 10).

b, Tabor paya: sown swamp land. 35.913 (11).

d, Bengka senggang. 35.915 (12).

e, Kaki padong remaung: foot, rocky ledge, tiger. 35.859 (27, 28, 33, 34).

f, g, Lelingkok semerai sungai: "crossing backwards and forwards across a river". *f*, 35.871 (10); *g*, 35.857 (13).

h, Bulan: the moon. 35.[illegible]21 (16).

i, Kaki miga dudok: "foot of the clouds in steps". 35.859 (2).

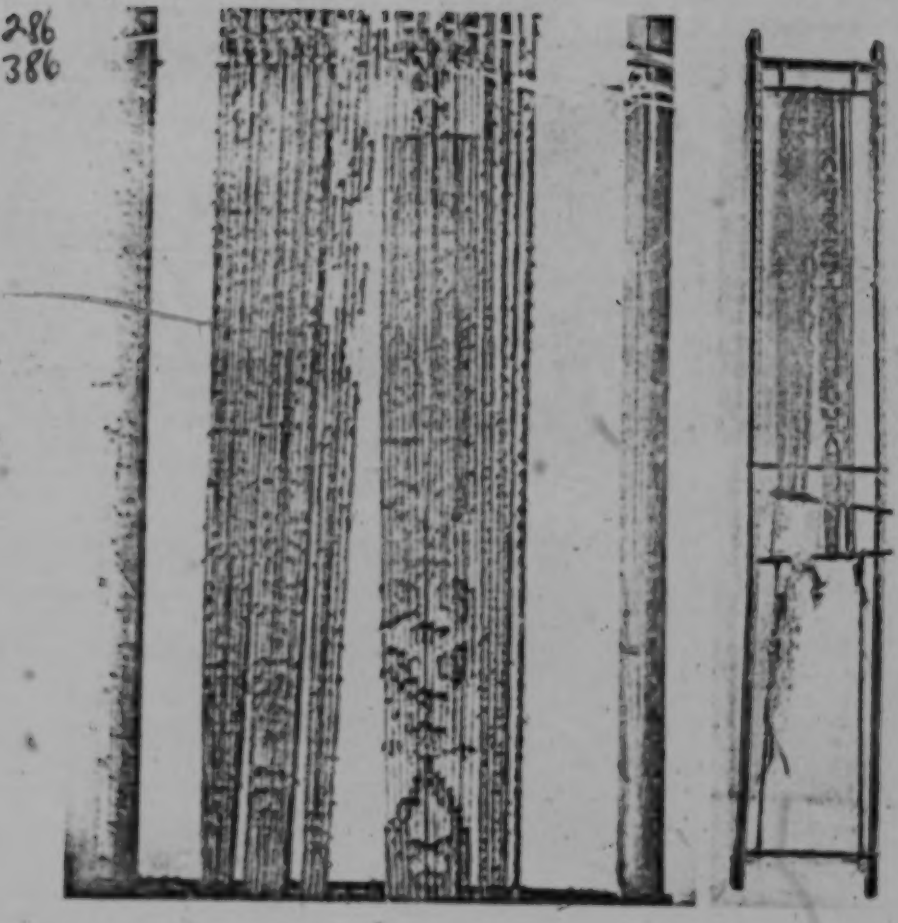
j, Burong berayah: bird with extended wings on *miga dudok*, between this and the next clouds in steps are four *rayok miga dudok*. 35.859 (4, 9).

k, Rayok miga dudok: "clouds in steps". 35.859 (12); one only is drawn which varies from those in *i*.

[end plate 25]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban 066

286
386



B A

A. Tenun ikat, tying frame. Museum of Ethnology, Cambridge. B. Detail of a portion of the tied and partly dyed warp threads of A. p. 9.

[end plate 26]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXVII

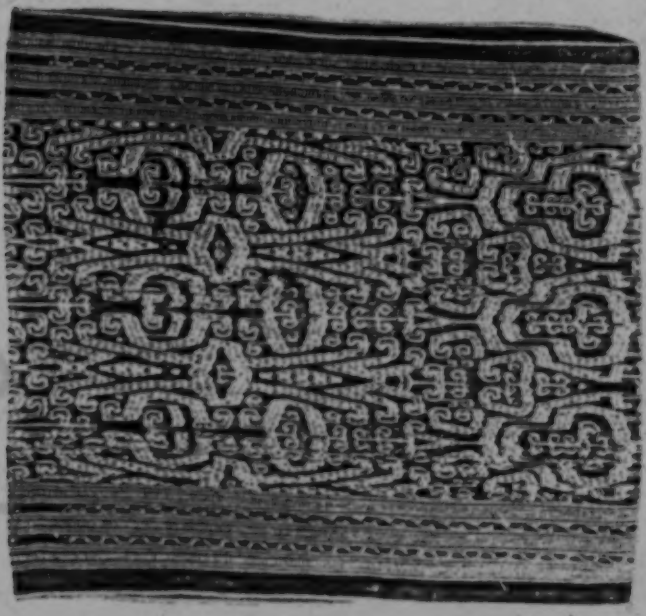
291
286
x531

Cloth for a *kelambi* as taken from the loom. 35·919. pp. 35, 36.

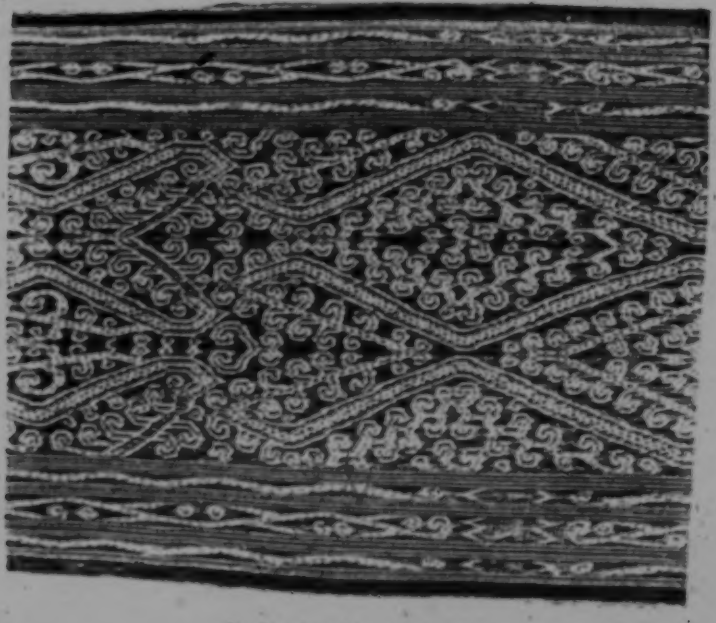
[end plate 27]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

291
286
531 X



A. *Bidang* 35.859. pp. 68, 69.



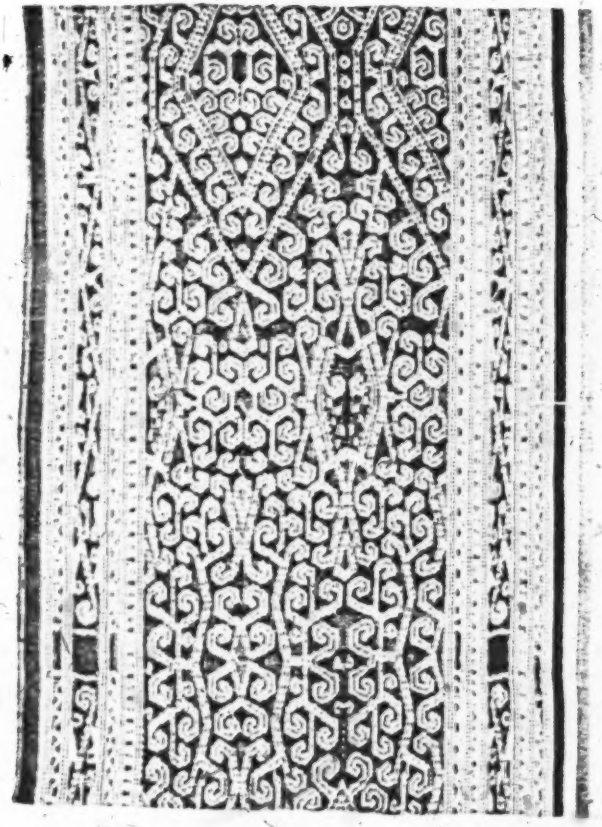
B. *Bidang* 35.863. pp. 72, 73.

[end plate 28]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXIX

291
286
X531

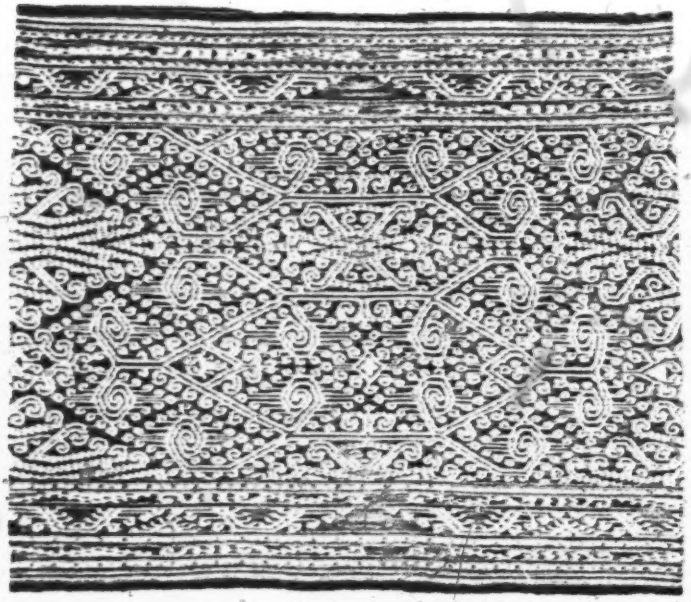


Illustrations, pp. 73, 74.

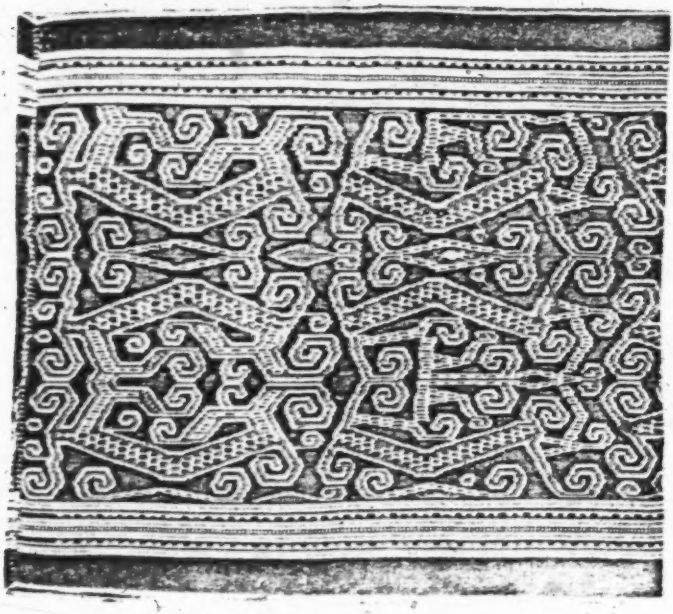
[end plate 29]

Plate XXX

241
286
531x



A. *Bidang* 32.872, pp. 78, 79.



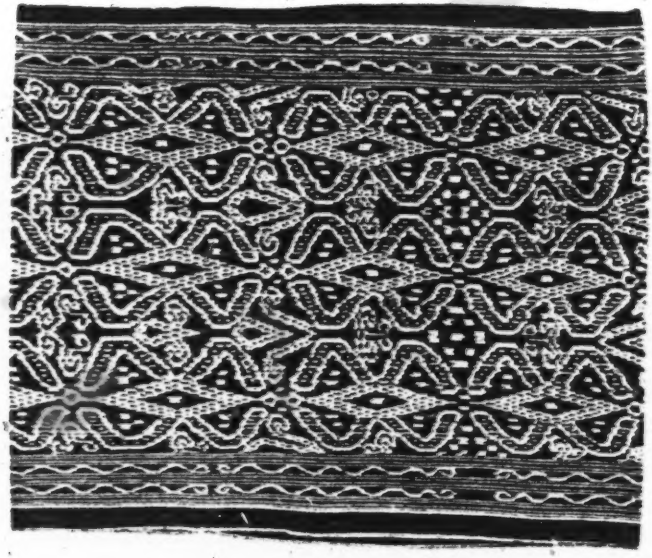
B. *Bidang* 35.878, pp. 81, 82

[end plate 30]

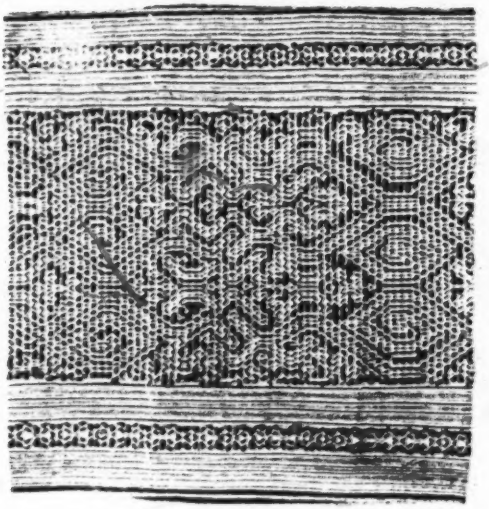
12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXXI

291
286
x53



A. *Bidang* 35.882, pp. 83, 84.



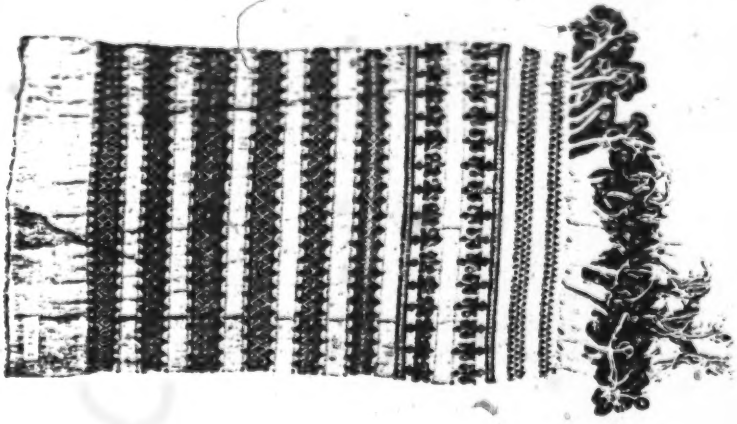
B. *Bidang* 35.806, pp. 89, 90.

[end plate 31]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

291
286
+531

Plate XXXII



B. *Kajang mat*, type 2, Z. 2345. pp. 100, 101.

A. *Kajang mat*, type 1, 31.93.4. pp. 94, 95.

[end plate 32]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXXIII

292
286
x531

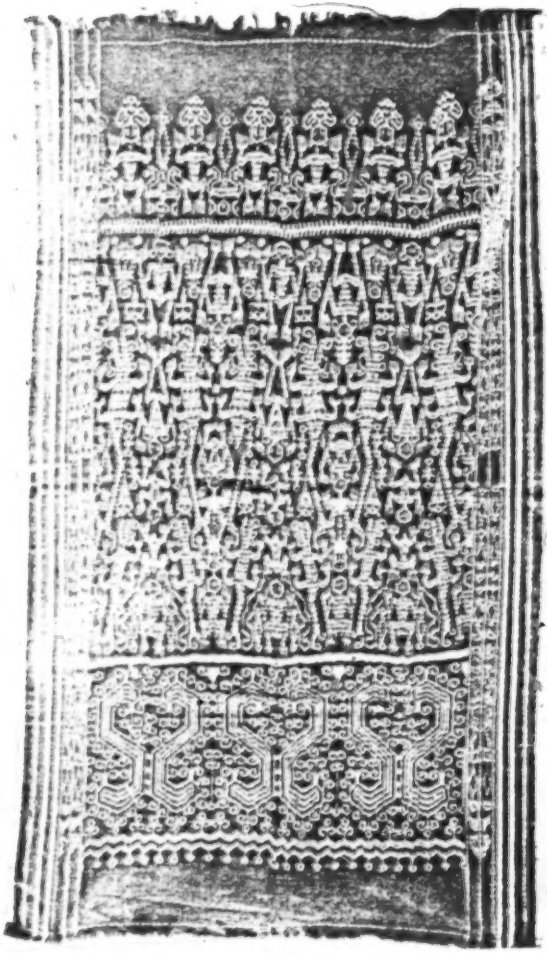


Plate [illegible] pp. 107, 108.

[end plate 33]

12: Haddon & Start E-4 (no date) 1936 OC6 Ioan OC6

Plate XXXIV

292
286
531X

Pua 35.923, pp. 111, 112.

[end plate 34]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXXV

292
286
531

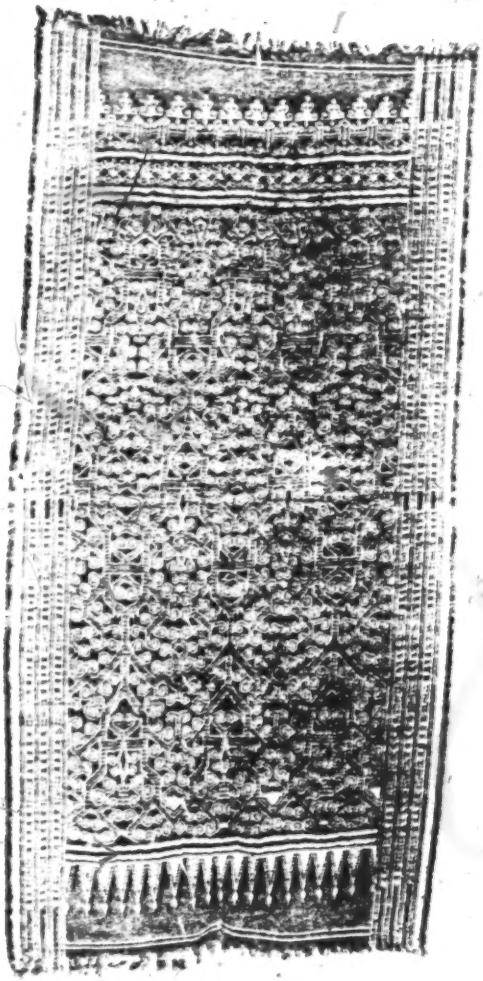


Plate: 622, pp. [illegible]

end plate 255

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

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[facing end plate 35]

12: Haddon & Start
531

OC6 Iban OC6

/For description and interpretation of the designs and patterns of Iban fabrics, see category 116, frontispiece; pp. xiii-xiv, 14-18, 22-23, 28-44, 46-52, 55-61, 123-37, 140-41, 144-46; end plates 1-25, 27-35./